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# TOWSON

## UNIVERSITY

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Graduate Catalog  
1997-1998

# TOWSON

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## U N I V E R S I T Y

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### Graduate Catalog 1997 - 1998

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#### ACCREDITATION

Towson University is accredited by the Middle States Association of Colleges and Schools. The University is a member of the Council of Graduate Schools in the United States and the North-eastern Association of Graduate Schools. It is approved by the Maryland State Board for Higher Education and the American Association of University Women.

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*Towson University is in compliance with federal and state laws and regulations that prohibit illegal discrimination.*

# ACADEMIC CALENDAR

## 1997-1998

(See appropriate schedule bulletin for registration dates, times and information)

### 1997 FALL SEMESTER

#### September

2 Tuesday  
Classes begin.

#### October

1 Wednesday  
Final date to submit graduation  
application for January graduation.

#### November

27-30 Thursday-Sunday  
Thanksgiving - no classes.

#### December

1 Monday  
Classes resume.  
19 Friday  
Last day of examinations and  
semester.

#### January

4 Sunday  
Commencement.

### 1998 SPRING SEMESTER

#### January

27 Tuesday  
Classes begin.

#### February

2 Monday  
Final date to submit application  
for May graduation.

#### March

23-29 Monday-Sunday  
Spring break, no classes.  
30 Monday  
Classes resume.

#### May

22 Friday  
Last day of examinations and  
semester.  
27 Wednesday  
Commencement.  
28 Thursday  
Commencement.

### 1998 MINIMESTER

January 2 to January 23

### 1998 SUMMER SESSIONS

#### May

27 Session I.

#### June

1 Monday  
Final date to submit graduation  
application for September  
graduation.

Dear Student,

Welcome to the Towson University community. You have made a wise decision to continue your education. You also have chosen an outstanding university at which to do so.

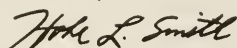
Graduate education is a high strategic priority at Towson University. We have embarked on an ambitious plan to add new graduate programs, strengthen existing programs, and expand the presence of graduate study on campus. By 2005, we expect graduate students to represent 20 percent of the student body.

Our graduate programs focus on applied knowledge and research. As a metropolitan university, Towson plays an important role in shaping and enhancing regional economic growth. One important way the University fulfills this role is through graduate education: providing advanced professional skills to citizens, while offering new knowledge and applications to private, public and nonprofit organizations.

As you are well aware, new knowledge is being created all about us at a rapid pace, and continuous, lifelong learning has become a necessity for those who want to stay current, credentialed, and creative. Whatever your field of study, I know that you will find at Towson a dedicated faculty, excellent information resources, state-of-the-art technology, and valuable connections to others in your profession – in short, the essential elements of a positive learning environment.

This catalog will serve as your guide during your graduate career at Towson University. In it you will find details about programs, courses, policies, and campus services. I wish you the best during your studies at Towson, and in all your future endeavors.

Cordially,



Hoke L. Smith  
President



# TOWSON

## UNIVERSITY

### Graduate Catalog 1997 - 1998

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The provisions of this catalog are not to be regarded as an irrevocable contract between the University and the student. The University reserves the right to change any provision or requirement at any time according to established procedures.



# GENERAL INFORMATION

## The University

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### History

Towson University had its beginnings in 1865 when the General Assembly of Maryland established a statewide public school system. The first state teacher training institution was the Maryland State Normal School, which in 1935 became the State Teachers College at Towson. Formally opened in Baltimore on January 15, 1866, the Normal School was for many years the only institution devoted exclusively to the preparation of teachers for the public schools of Maryland. The school occupied three different locations in the city of Baltimore before moving to its present suburban location in 1915. By 1935 the Bachelor of Science degree in education was offered and the school's name was changed to the Maryland State Teachers College at Towson.

In 1946 the arts and sciences program was introduced at Towson. Beginning as a two-year transfer program, it was extended to a four-year degree-granting program in 1960.

In 1963 the college was authorized by action of the legislature to expand its offerings in the arts and sciences while maintaining a strong program in teacher education, and to change its name from State Teachers College at Towson to Towson State College. Graduate education began in 1958, and in 1976 the legislature granted University status and renamed the institution Towson State University. On July 1, 1997, an act of the legislature changed the name once more, to Towson University.

### The Campus

The University is situated on a campus of over 320 acres located one and a half miles beyond the northern border of the city of Baltimore. Within an eight-mile radius of the campus are all the cultural advantages of the city of Baltimore - The Peabody Conservatory of Music and Library, the Enoch Pratt Free Library, the Walters Art Gallery, the Baltimore Museum of Art, Meyerhoff Symphony Hall, the Lyric Theatre, Center Stage and many other cultural centers necessary for a well-rounded university experience.

Campus buildings and facilities give excellent support to the various University programs. The inside back cover of this catalog provides a pictorial guide of the campus, and Appendix A describes the campus facilities.

## The Graduate School

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Graduate study prepares qualified students for career advancement, leadership positions and further graduate study. The University serves the community, state, and region by making graduate degree programs available to full-time students and part-time students who can attend classes only in the evening. Numerous students also take advantage of graduate offerings without enrolling in degree programs.

The graduate faculty, which includes many widely recognized scholars and practitioners, is committed to excellence in teaching in a scholarly environment. The faculty, classroom, library, clinical, laboratory and studio assets of the graduate programs are supplemented by a community rich in cultural, artistic, social, technological and scientific resources.

There are now twenty-seven graduate degree programs and two certificate programs. The University is proud of the many alumni of our graduate programs who fulfill with distinction the requirements of responsible careers.

### A Diversified Student Body

The faculty and administration of the College of Graduate and Extended Education at Towson University recognize and value the richness that is present in a diversified student body. Towson University students are racially and nationally diversified.

### Graduate Studies Committee

The Graduate Studies Committee, a committee of the University Senate, determines policy for graduate programs. Matters of graduate curriculum and standards are the responsibility of the committee. The Graduate Studies Committee also hears appeals related to academic matters by graduate students. Student appeals to the committee should be directed to the Dean, College of Graduate and Extended Education.

The voting membership is comprised of six members of the faculty and two graduate

students. The Dean of the College of Graduate and Extended Education, two graduate coordinators and the Director of the Library are ex-officio members. The chairperson and secretary of the committee are elected from its membership.

### Administration Of Graduate School

The Dean of the College of Graduate and Extended Education, Associate Dean, Director of Graduate Education and the Associate Director for Graduate Admissions and Outreach are the administrators responsible for the Graduate School. They administer graduate study and implement the policies of the Graduate Studies Committee.

### Graduate School Office Hours

The Graduate School Office is open Monday through Thursday from 8:30 a.m. to 7:00 p.m. and Friday from 8:30 a.m. to 5:00 p.m. (except for scheduled holidays). During registration, the office is open in the evening according to the registration schedule. Students may arrange for appointments with the Graduate staff at other hours. The Graduate School telephone number is 410-830-2501.

### Correspondence

Correspondence concerning graduate study should be addressed to:

Director of Graduate Education  
Towson University  
Towson, Maryland 21252-0001

# ACADEMIC INFORMATION

## Application and Admissions

### Application to Graduate School

Admission to Graduate School at Towson University is granted to applicants whose academic and personal qualifications give promise of success in graduate study. The applicant must hold a baccalaureate degree from a regionally accredited college or university, or from a Maryland college or university that is approved by the Maryland Higher Education Commission.

The application process is self-managed. The applicant has the responsibility for acquiring all application credentials and submitting them in an envelope to the Graduate School Office. Credentials should not be sent separately. The application packet with complete instructions may be obtained from the Graduate Office.

Registration as a non-degree graduate student in courses at the 500 and 600 level is possible, in some programs, during the admission review period. Non-degree students and students wishing to register before the admission decision must submit the application form and the application fee to the Graduate office before registration. Up to twelve hours of courses taken as a non-degree student may be included in the degree if approved later by the program director.

### International Students

Application for admission should be made at least six months prior to the date of anticipated enrollment. Admission credentials must include: (1) an application for admission; (2) two official or certified true copies of all grade reports, diplomas, and academic records attesting to the completion of undergraduate work; (3) supplemental information form for international students which includes a financial summary stating amounts and sources of support for the duration of study; and (4) verification of English competency.

English competency is certified by achieve-

ment of a minimum of 550 on the Test of English as a Foreign Language (TOEFL). (A minimum score of 500 is required for admission into Music Performance, Studio Arts, Applied and Industrial Mathematics, and Computer Science.) Information about the TOEFL administration dates and registration procedure may be obtained from TOEFL, Educational Testing Service, Princeton, New Jersey 08540, USA. Towson University is a test site for the TOEFL. Towson University administers an institutional TOEFL in the fall and spring. Information can be obtained from the International Student Office 410-830-2421.

### Admission

An applicant for admission to a degree program can meet admission requirements by holding (1) a master's degree or doctorate from a regionally accredited college or university, or (2) a bachelor's degree with a grade point average of 3.00 (on a 4-point scale) and by meeting all additional admission requirements of the program. The grade average requirements may be satisfied by a 3.00 average for the most recent 60 credits on the applicant's baccalaureate record. Courses taken beyond the baccalaureate degree may be included in the undergraduate grade point average if they are at least upper division undergraduate work. Courses used for admission credentials, including program prerequisites and courses used to raise the average GPA for admission, cannot be applied toward a master's degree. At the option of the program director, students in the second bachelor's degree program may be evaluated on the basis of the grade point average in that program if 30 or more credits have been completed.

Admission with conditions may be granted to applicants whose academic achievement does not meet the standards required for admission. See individual program description for specific requirements. Students admitted to a degree

program with conditions must satisfy requirements and correct any deficiencies as determined by the program director. Requirements that must be completed to continue in the program are listed on the admission work sheet and sent to the student with the letter of admission.

The minimum undergraduate grade point average for conditional admission may be waived for an applicant whose undergraduate degree was obtained at least ten years earlier, and who can document a minimum of five years of successful working experience in a field relevant to the applicant's program. The candidate's application to the Graduate School must be supported in writing by the program director. Candidates must meet all other entrance requirements of the program.

### **Non-Degree Students**

Students who do not wish to pursue a degree are permitted to register for courses through the 600 level. Those who do not meet standards required for admission to a program may take courses, through the 600 level, as special non-degree students. Non-degree students who wish to take courses above the 600 level should request a transcript evaluation. Such students must meet the same grade point average requirements as fully admitted graduate students. Requests should be directed to the Associate Director for Graduate Admissions. A limit of 12 semester hours taken while in the non-degree status may be applied to a degree program with the approval of the program director.

### **Admission Prior to Receiving Baccalaureate Degree**

Admission to some programs may be granted to seniors in their final semester. Undergraduate work through the first semester of the senior year is evaluated so transcripts submitted must include all grade through that semester. Admission stand-

ing is subject to cancellation or change if the admission credentials remain incomplete or do not meet the requirements for admission.

### **Graduate Work by Seniors at Towson University**

Seniors at Towson University may register for a maximum of six credit hours of graduate study if they meet the following criteria: (1) the graduate courses must be in excess of the credits required for the bachelor's degree; (2) a written request to the Director of Graduate Education from the student specifying the graduate courses is submitted in advance of registration; (3) a 3.00 or higher cumulative average. Payment for the courses is separate from that of undergraduate courses taken in the same semester and is at the graduate tuition rate. The courses may be transferred later to the student's graduate record.

### **Enrollment Requirement after Application**

Applicants for admission must indicate the date when they first plan to enroll. Records of students who do not enroll for courses in the stated semester will be held for one year. If enrollment in courses does not occur, or the student does not inform the Graduate School Office of another starting date, the applicant's records will be removed from the files and the student must apply again for future enrollment. One year is permitted to initiate courses work after admission to a degree program. If the applicant does not enroll in courses by that time the admission process must begin anew.

An applicant enrolled for courses is withdrawn from those courses if the transcript validating the baccalaureate degree is not received in the Graduate School Office by the required date; no refund is granted, and the student's application is removed from the Graduate files. A new application and fee must be submitted if the student wishes to take courses for graduate credit at a later time.

## Registration and Fees

### Registration

Information concerning registration may be obtained in the Graduate School Office. Students who have never applied for admission and are registering for the first time may take 500-600 level courses for graduate credit by completing the application for admission to Graduate School. Registration for 700- and 800-level courses is contingent upon the granting of full admission.

### Fees

Tuition and other fees are subject to change without notice by action of the board of trustees.

Application fee: (non-refundable) \$40

Tuition:

Undergraduate, per semester hour

In state \$134

Out of state \$300

Graduate, per semester hour

In state \$174

Out of state \$340

University fee per

credit - undergraduate

(non-refundable) \$ 35

University fee per

credit-graduate

(non-refundable) \$ 36

Late registration fee \$ 75

Private music lessons \$85 per semester  
hour plus tuition

### Payment Of Fees

All checks or money orders should be made payable to Towson University for the exact amount of the charges. The student's social security number must appear on all checks submitted to the University. The University has no deferred payment plans. The *Discover*, *MasterCard* and *VISA* credit cards can be used for tuition, fees, room, dining point plan, and other charges. It is imperative that

students adhere to published payment deadlines. *If tuition, fees, and related charges are not paid by the established payment date, your class schedule will be voided and, if applicable, your residence hall space will be forfeited.* When a check given in payment of fees, fines or services is returned unpaid by the bank for any reason, a penalty fee of \$50 is charged. Failure to reimburse the University for an uncollectible check may result in your class schedule being voided.

Financial policy set by the Board of Regents and supported by the legislative auditors of the State of Maryland says that *all previous balances must be paid prior to registration for the following academic semester.* The University employs a "first in/first out" technique when applying payments to accounts. Therefore, payments are used to satisfy the oldest outstanding charge prior to applying any portion of a payment to current or more recent charges. Should the account of any student be sent to the Central Collection Unit of the State of Maryland because it is deemed delinquent, a 17 percent collection fee will be charged to the student. Students with outstanding balances should contact Financial Operations. Transcript requests will not be honored if a student has a financial obligation to the University.

### Continuous Enrollment

Students are expected to register for courses on a regular basis. Should there be a lapse of two academic years during which courses are not taken for graduate credit, the student's records are removed from the Graduate Office files. If the student desires to take graduate courses after this action, he or she must initiate the application process as a new applicant. Students who wish to take graduate courses as non-degree students after this action must complete a new application but do not have to resubmit transcripts.

Students in a graduate program must request readmission, and will be notified of any required materials necessary for readmission.

Course Load

A student who registers for nine graduate semester hours is considered a full-time student. One who takes fewer hours is designated a part-time student. The maximum load for full-time students is 12 semester hours.

Auditing Courses

Students may audit courses that carry graduate credit with the written consent of the instructor. Any graduate student may audit a course through the 600 level. Courses at the 700 level may be audited only by students admitted to a degree program. Audited courses appear on the University record as "AU" and may not be used to repeat a course for which credit has already been earned. Audited courses may not count as part of the credit hour load or be applied toward the master's degree. The regular tuition rate applies to audited courses.

Candidates for Degrees at Other Institutions

Students who are candidates for a graduate degree at another college or university may take graduate courses at Towson University. At least two weeks before registration the student must present a letter from the graduate dean of the home institution indicating that he or she is in good standing and that credit earned at Towson University is acceptable towards his or her degree.

Course Numbers

Each department has one or more three or four letter codes preceding the three digit course classification number. The three digit course number indicates the following with respect to level:

- 100-499 undergraduate courses
- 500-599 upper-division courses offered for graduate credit

- 600-699 graduate courses available to all post-baccalaureate students
- 700-799 graduate courses available only to fully-admitted graduate students
- 800-899 graduate research and thesis courses

Upper Division Courses for Graduate Credit

Courses taken for undergraduate credit may not be repeated at the 500 level for graduate credit. Students should be sure that any course taken at the 500 level does not appear on a previous transcript with the same title.

Scheduling of Courses

Most graduate courses are offered after 4:00 p.m.

Grading System

- A - 4 quality points
- B - 3 quality points
- C - 2 quality points
- F - 0 quality points
- FX - assigned when the student registers for a course but does not attend, or fails to withdraw officially from the course by the published last date to drop the course.

I (incomplete) -assigned at the end of the semester because of illness or other reason beyond control of the student. Unless the course is completed by the last day of the next regular semester, the grade becomes "F." It is the responsibility of the student to make arrangements to complete course requirements for removal of the "I."

IP (in progress) -assigned for the thesis continuum. When the thesis is completed the "IP" grades are changed to "S" (satisfactory) or "U" (unsatisfactory).

W (withdrawn) -assigned when the student withdraws from the course according to policy.

## Inter-Institutional Enrollment

Students admitted to graduate programs are eligible to take courses at other University System of Maryland schools. Credits earned at a host school will be placed on the student's Towson record with the grade earned. Tuition and fees for any such courses will be paid at Towson. Regulations governing this type of enrollment and the form for registration may be obtained in the Graduate School Office. The form must be signed by the Associate Dean after appropriate approval is obtained. Inter-institutional enrollment is not available for the summer sessions.

## Repeating Courses

Courses for which a grade has been awarded may be repeated only once. The grade of "W" does not replace a previously awarded grade. When the course is repeated the student receives the credits for the course (counted once) and the higher of the two grades. Upon completion of the repeated course, a repeated course form must be submitted to the Registrar by the student. Grades for courses taken at other institutions may not be used to re-

place grades for courses completed at Towson. Courses taken for undergraduate credit may not be repeated for graduate degree credit.

## Withdrawal from a Course

Students dropping within the change of schedule period will have no grade recorded. If the course is dropped after the change of schedule period, but within the period to drop with the grade of "W," the "W" grade will be recorded on the permanent record. Students who do not officially drop a course during the established time periods will receive the grade earned in the course (A,B,C,F) as determined by the instructor.

Students with documented medical problems or verified circumstances beyond their control may petition the Graduate Studies Committee, in care of the Associate Dean, Graduate School, to drop a course after the established deadline and receive a grade of "W." Documentation must accompany the petition. If approved, grades of "W" will be recorded for all unearned grades (FX). Earned grades (A,B,C,F) will not be changed.

## Financial Aid

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Students who wish to apply for a graduate assistantship or for other types of financial aid must be admitted to a degree program before an award can be made. New students should allow sufficient time for admission credentials to be assembled and for the graduate school application to be completely processed.

### Assistantships

A limited number of graduate assistantships on and off campus are available to qualified students recommended by the appropriate department. The stipends vary according to length of the period of employment and the number of hours worked. The full stipend is \$4,800. In addition to the stipend the assistant receives a waiver of tuition for regular

courses. Waivers are prorated according to the terms of the assistantships. Graduate assistants are required to provide appropriate work each week during the semesters in which assistantships are in effect. Application forms for assistantships may be obtained from the Graduate School Office. Detailed information may be obtained by writing to the Director of Graduate Education, Graduate School.

### Campus-Based Financial Aid Programs

Financial aid is available to graduate students admitted as degree candidates, making satisfactory academic progress, fulfilling the eligibility requirements of the program for which they apply, and registering for six or more

credits a semester.

The University receives a limited amount of money each year from the Federal Perkins Student Loan and Federal Work Study programs to assist students. The programs are “need based.” To receive consideration, a student must file a Free Application for Federal Student Aid (FAFSA) or a renewal application. All application materials must be received in the Financial Aid office by March 15th for the following academic year for first consideration. Students may apply as early as January 1st. (This form should be mailed by January 30th to allow sufficient time for processing. More detailed information on financial aid programs and eligibility requirements is available upon request from the Financial Aid Office.

#### *The Federal Perkins Loan Program*

If the student is eligible and funds are available, a student may borrow from this program at 5% interest. No interest is due as long as the student registers at least half time. When a student drops out, drops below half time, or graduates, the grace period commences. Interest begins to accrue at the end of the grace period. See promissory note for length of grace period.

#### *Federal Work Study Program (FWS)*

If the student is eligible and funds are available, FWS allows a student to work on or off campus. All Federal Work Study jobs must be cleared through the Financial Aid Office. A FWS eligibility is the maximum amount that a student may earn. It is the responsibility of the student to find a FWS job and to monitor earnings so as to avoid exceeding FWS eligibility.

### **Federal Direct Student Loan Program**

The eligibility requirements for a subsidized loan from this program are the same as for the campus-based programs. If you do not qualify for a subsidized federal direct student loan, you may borrow from this program and receive an unsubsidized loan.

With a subsidized Federal Direct Loan, no interest is charged and no repayment is required until six months after you cease to be enrolled on at least a half-time basis. If you borrow from this loan program and receive an unsubsidized loan, interest will accrue while you are in school, and during grace periods. The principal is not due until six months after you cease to be enrolled on at least a half-time basis.

For new borrowers the interest rate is variable based on the 91-day treasury bill rates for a 12-month period.

Your actual payment amount will depend upon the total amount you borrow. The more you borrow, the higher your monthly payments will be. Repayment schedules and options are available for the Financial Aid Office. You may repay the entire loan or any portion of it at any time without penalty.

Graduate students may borrow up to \$18,500 a year, up to a maximum of \$138,500 including any loans made at the undergraduate level.

A student may never borrow more than the cost of education less other aid received for the academic period. Graduate students must take a minimum of six (6) graduate level courses a semester to borrow at the graduate level. If you are taking less than six (6) graduate credits a semester you will borrow at the undergraduate level.

## Degree Requirements

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### Eligibility For Graduation

Students must complete all program prerequisites, as well as all required and elective master's degree courses with a minimum average of 3.0 in all graduate work taken at Towson University as well as 3.0 in all courses included on the program of study. Students must also pass the master's degree written examination, and, if required by the particular program, additional oral and written examinations. All degree requirements including resolution of incomplete grades and the submission of the final copy of the thesis (which must be delivered to the Graduate School), if the thesis option is selected, must be completed by the last day of classes of the semester in which the student is applying for graduation. The application for graduation must be filed by the published date.

### Thesis Procedure

Students intending to write a thesis should obtain the manual *Guidelines for Preparing the Master's Degree Thesis* from their program director or from the Graduate School Office.

### Time Limitation For Completion Of Degree Requirements

All requirements for the master's degree must be completed within a seven-year period.

### Upper-Division Courses

A maximum of nine semester hours of upper-division courses (500 level) may be earned toward a master's degree.

### "C" Grades

A maximum of six semester hours of "C" grades are allowed for graduation.

### Courses Taken As A Non-Degree Student

A limit or twelve semester hours may be used in a program if taken by non-degree students who later apply for degree status.

### Special Format Courses

In all degree programs, a limit of 12 semester hours is placed on workshops, independent study, travel and study, directed reading, or other special format courses.

### Transfer Credit

A maximum of six transfer credits may be allowed, but required courses in a program must be completed at Towson University.

### Application For Graduation

The request for graduation review for a degree, music certificate, or the certificate of advanced studies in school psychology is submitted to the Graduate School Office. The deadline for submission of the application is published in the academic calendar on page 1 of this catalog and in the schedule booklet. If the application is submitted late, graduation is postponed until the next graduation date.

All graduation requirements including resolution of incomplete grades and acceptance of the completed thesis (if a thesis is undertaken) must be completed by the last day of the semester in which the student is applying for graduation.

If the student does not complete requirements for graduation, the application must be resubmitted during the semester in which graduation is intended.

## Academic Policies

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### Towson University Policies

#### *Privacy Rights Of Parents And Students*

Towson University is in compliance with Section 513 (protection of the rights and privacy of parents and students) and Section 514 (protection of pupil rights) of Title V - Education Administration of the Education Amendments of 1974. University policies on this issue are spelled out in detail in Appendix B.

#### *Non-Discrimination In Education And Employment*

Towson University is in compliance with Titles VI and VII of the Civil Rights Act of 1964, the Equal Pay Act of 1963, Title IX of the Education Amendments of 1972. Titles VII and VIII of the Public Health Service Act, Section 504 of the Rehabilitation Act of 1973, Section 303 of the Age Discrimination Act of 1975, Executive Order 11246/11375 and Article 64A (The Governor's Code of Fair Practices). In accordance with these laws, the University does not discriminate against any individual for reasons of race, color religion, national origin, sex, age, political affiliation, marital status, or condition of handicap in the admission of students, educational programs and activities, hiring of faculty or staff, or any terms and conditions of employment. The University is also in compliance with federal regulations regarding prohibition of discrimination on the basis of veteran status. Information on these laws and copies of the Affirmative Action Plan of Towson University are available from the Affirmative Action Officer.

#### *Maintenance And Disposition Of Records*

Students who do not register within one year of admission must submit new admission credentials and application data if they subsequently take courses.

All student records, including academic records from other institutions, are part of the

official file, and are retained subject to stated policies. They cannot be returned or duplicated for any purpose. Students should obtain their own copies of official credentials for advisory purposes and other personal uses.

#### *Confidentiality Of Records*

In keeping with the Family Educational Rights and Privacy Act of 1974, Towson University respects the confidential relationship between the University and its students by preserving, to the maximum extent possible, the privacy of all records relating to its students. Records are kept only on matters relevant to the academic admission process and to the student's progress toward a degree. The records will not be disclosed except upon student's written request or with his or her written consent, under legal compulsion, or in carefully circumscribed instances based on clearly-defined policies of Towson University (see appendix B).

#### *Substance Abuse Policy*

Each student is expected to read and abide by the policies and regulations of Towson University concerning drug and alcohol abuse. The Substance Abuse Policy is found in Appendix E.

#### *Student Responsibility*

It is the responsibility of the student to become knowledgeable of, and to observe, all University policies, regulations and procedures. In no case will a waiver of requirements or an exception be granted because a student pleads ignorance of policy or regulation or asserts that he/she was not informed of a specific requirement by an advisor or other University authority. The student should become especially familiar with: (1) the regulations in this catalog, (2) the section presenting

requirements for the degree sought, and (3) the offerings and requirements of the student's major department.

Policy for graduate study, as stated in this catalog, is in effect for all students admitted to a program for the 1997-1998 academic year, and is that under which the student operates through the term of his or her study toward completion of degree requirements (subject to the disclaimer in the next paragraph).

While the provisions of this catalog will ordinarily be applied as stated, the catalog and the information contained herein do not constitute a contract. Towson University reserves the right to change any provision listed in this catalog, including but not limited to academic requirements for graduation, without actual notice to individual students. Every effort will be made to keep students advised of any such changes. Information on changes will be available from advisors and in the dean's office. It is especially important to note that it is the individual student's responsibility to keep apprised of current graduation requirements for his/her particular degree program.

## Graduate School Policies

### *Academic Integrity*

Students are expected to maintain a high standard of academic integrity. Inappropriate classroom conduct, cheating and plagiarism may result in disciplinary action by the Graduate Studies Committee.

Instructors are responsible for maintaining the academic integrity of courses and will initially handle problems of classroom conduct, cheating and plagiarism in a discussion with the student. Unauthorized assistance in preparing materials submitted as original work by the student constitutes a violation of academic integrity and results in action being taken. The instructor may lower the student's grade or give

a failing grade for the course. If the instructor decides that further action is warranted, he or she will notify the student that a formal charge will be made to the Graduate Studies Committee. A written report of the incident will be filed with the committee.

The committee will review the facts of the case and make a decision regarding the status of the student. The committee will either absolve the student of the violation or impose a penalty. The penalty may be, but is not limited to, the following: (1) agreement that the lowered course grade is sufficient disciplinary action; (2) mandatory suspension from taking courses for graduate credit for a designated period of time; or (3) dismissal from Graduate School.

### *Academic Standing*

Good academic standing in a degree program requires a minimum 3.0 grade point average for all courses taken for graduate credit whether or not they are required for the degree. Good academic standing is necessary to transfer course work, to take the master's degree examination and to graduate.

Should the degree student's average fall below a 3.0, a letter of academic warning will be sent. The grade-point average must be restored to 3.0 within nine semester hours, completed in a one-year period from the semester in which the GPA fell below 3.0. A student on academic probation who does not restore the GPA to 3.0 as required will be withdrawn from the degree program.

The 3.0 average may be restored by repeating courses or by taking additional courses. If courses beyond those required in the degree are taken to raise the GPA, a maximum of six semester hours approved by the graduate coordinator is allowed. All requirements for the program must be completed within the seven-year period permitted by Graduate policy.

### *Academic Standards, Appeals, Hearings And Grievances*

Matters of graduate academic standards

are the responsibility of the Graduate Studies Committee. Appeals related to academic matters should be made to this committee by writing in care of the Dean, Graduate School.

Graduate School policy on procedures for appeals, hearings, and grievances is found in Appendix F of this catalog.

In all cases involving disciplinary action, or other charges, procedures of due process are followed. Additional information may be found under the headings of "Graduate Studies Committee" and "Academic Integrity."

#### *Admission To A Second Program After Academic Dismissal*

A student academically dismissed from a degree program is not eligible to reenter the same program, but may apply to another degree program. No additional admission requests will be accepted from a student academically dismissed from two programs. A student academically dismissed from a degree program because of a low cumulative average may not utilize courses toward a degree that were taken prior to and including the semester in which the average fell below a 3.0.

#### *Advising*

At the time of admission to a graduate program, the student is assigned a faculty advisor by the department responsible for the student's program of study. Registration for a newly-admitted student begins with a visit to the academic advisor, who will assist the student with information about specific courses and degree requirements, and the development of a program of study. The student should consult with the advisor before registration each semester.

#### *Program of Study*

Each degree student must follow a program which is approved by the student's advisor and the program director, and which conforms to Graduate School Policy. Courses taken prior to planning the program of study can be included only if approved by the gradu-

ate coordinator. The advisor's and the program director's approval is needed for any revisions. The program of study may include no more than nine credits at the 500 level.

#### *Change From One Degree Program To A Different Program*

Students may request a change of program at any time, but may not be enrolled in two master's degree programs concurrently. The request should be in writing to the Graduate School Office. The standing granted in the original program does not guarantee similar standing in the new program, which is entered subject to policies in effect at the time of the change.

Courses taken prior to the transfer may be utilized as part of the degree program if applicable. All courses, including those taken in the earlier program and used in the new program, are calculated in the GPA considered for graduation. The seven-year period permitted for completion of program requirements begins with the earliest course taken in the former program that is used in the new program.

It is possible to return to the first program if the return is requested in writing within 60 days of the original request to change programs. The student may return to the original program after the 60-day period subject to admission policies in effect at the time of the application to return.

#### *Exceptions To Academic Policies, Regulations, Or Requirements*

Exceptions to academic policies, regulations, or requirements as stated in this catalog or elsewhere are rarely made, and then only for truly extenuating circumstances. A student who believes an exception is justified may petition the Associate Dean, Graduate School. The request must state the specific exception being requested and the reasons for the request. For degree students, the program director must countersign the request, indicating his or her recommendation. In cases that involve faculty in addition to the program director, the coor-

ordinator forwards the request to the appropriate faculty member(s) for additional written recommendation. The signed request is then forwarded by the program director to the Associate Dean, Graduate School. Non-degree students must petition the Associate Dean directly.

#### *Reentry To A Degree Program After Lapse Of Time Limitation*

For readmission to the same or another degree program after the seven-year period for completion of the degree has elapsed, the student's records are evaluated and admission is granted under current Graduate School policy. Previous course work will be reviewed by the program director. Up to twelve semester hours of courses taken while previously admitted may be applied to the degree if they are still part of the program's curriculum and are approved by the program director. Any courses not approved must be repeated or replaced with additional courses approved by the program director.

#### *Transfer Credit*

Courses taken prior to admission must have been taken at a regionally accredited college or university, must be applicable to a graduate degree at the offering institution, and cannot have been utilized as part of an earned

degree. Transfer courses must have been completed with a grade of "B" or higher (Pass/Fail or S/U grading is not acceptable), and within the span of seven years allowed for completion of the degree requirements. The seven year limitation cannot be extended for transfer credits. Courses such as workshops, independent study, travel and study, directed reading, and other special format courses are not acceptable for transfer credit. In-service courses, whether or not they are awarded graduate credit by a college or university are not acceptable for transfer credit.

Students request permission to take courses at another institution after admission to Towson University by submitting a written request to the Director of Graduate Education prior to taking the course. The course must be approved for the student's program and not be offered by Towson University during the period of the student's attendance. Written approval must be received by the student from the Director of Graduate Education before the student registers for the requested course(s). Transfer credits are not used in computing academic averages. The courses appear on the Towson University transcript with the titles and credits earned, but without grades earned.



# DEGREE AND CERTIFICATE PROGRAMS

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## ART EDUCATION

Degree: Master of Education  
 Program Director: Jane Bates  
 410-830-2797

The degree program is to provide advanced training in art education, to promote growth of art educators through individual research, and to increase skill and knowledge in art production, art history, aesthetics and art criticism. The 33 hour program consists of 12 hours of required coursework and 21 hours of electives. Students may select one of three elective tracks in pursuit of individual goals.

### Admission Requirements:

1. An undergraduate degree in art education  
*And/Or*  
 Certification as a public school art teacher
2. A minimum grade point average of 3.0 for full admission or 2.5 for conditional admission.

### Degree Requirements:

1. In an effort to provide for diverse interests and insure flexibility, the program offers three elective tracks (21 s.h.):
    - a. Broad-based studio track  
 This track is designed to enhance K-12 art teaching. Students select a variety of courses drawn from studio, art history, and art education areas.
    - b. In-depth studio track  
 This track is designed for those concentrating their electives in a studio area. Students apply to work with a studio mentor and exhibit work in a final show.
    - c. Historical track  
 This track is designed for those interested in pursuing cultural/historical aspects of art and art education. Students concentrate electives in art history.
- Courses numbered 600 to 799 should ordinarily be selected, but a maximum of nine semester hours in 500 level courses may be taken with the approval of the student's advisor. Six semester hours may be taken in departments other than art with prior approval.
2. Regardless of which elective track is selected, all students are required to complete a written thesis project in art education, the writ-

ing of which is done in the following courses:

- a. ARED 695 Research in Art and Art Education (3) offered in the spring semester, followed by:  
 ARED797 Seminar in Art Education (3) offered in the fall semester (students must pass these courses with a grade of "A" or "B" for credit).
3. Additional course requirements  
 EDUC 601 Educational Ideas in Historical Perspective (3)  
 PSYC 611 Developmental Psychology (3)

## ART, STUDIO

Degree: Master of Fine Arts  
 Program Director: Stuart Stein  
 410-830-2801

The Master of Fine Arts degree at Towson University is designed to meet the needs of those who wish to pursue the study of art, either for a career as an artist, or as a college level instructor. The program consists of professional study in either painting, photography, graphic design, illustration, sculpture printmaking, ceramics, jewelry, fibers, or inter-related media. M.F.A. students are encouraged to attend full-time, but may attend part-time for part or all of their degree work. The M.F.A. student enrolled full-time also maintains a residency in the art department, working in an assigned studio space.

The Art Department fosters an M.F.A. program that draws from all aspects of a diverse and comprehensive curriculum. M.F.A. students study within a specific concentration while also being able to choose from a wide variety of learning experiences. The conceptual and ideological bases for artistic endeavors are explored through art history, graduate seminars, and weekly critiques. The goals of the M.F.A. program are to direct the M.F.A. student to explore, focus, and excel. Through conceptual and ideological dialogue, as well as the availability of technical expertise, the M.F.A. student at Towson is directed towards thematic consistency. While the Post-modern

environment encourages the integration of new technologies, interdisciplinary approaches and multicultural influences, the need to focus ideas within this climate is foremost in the mentoring of developing artists in the M.F.A. program.

Applicants to the M.F.A. program who are denied admission but display outstanding potential, may be invited to participate in post-baccalaureate studies in Studio Art as preadmission coursework for the M.F.A. program in Studio Art. Upon successful completion, these studies guarantee acceptance into the M.F.A. program in Studio Art.

### Admission Requirements:

1. A baccalaureate degree, preferably in art.
2. A grade point average of 3.0 for full admission or 2.5 for conditional admission.
3. The following credentials must be sent directly to the graduate school program director of the Studio Art program:

A letter of intent: statement of your objectives

A current resume

Two letters of recommendation

A slide portfolio of work: twenty labeled 35mm color transparencies enclosed in a plastic slide sheet.

### Degree Requirements:

Completion of 60 semester hours of degree work:

1. Area of Study - 24 semester hours  
600 and 700 studio art courses in a selected area of study.
2. ART 783 M.F.A. Seminar (3)
3. Art History - 9 semester hours
4. Elective Art Courses - 6 semester hours  
Courses selected with the consent of the advisor from approved graduate courses.
5. Electives - 9 semester hours  
Courses selected with the consent of the advisor from any discipline.
6. Final Semester:  
ART 785 M.F.A. Studio II (3)  
ART 896 M.F.A. Project (6)
7. Students are required to participate in both a mid-term and end-of-term review of their work each semester. Students failing the mid-term review will have until the end-of-term review to make necessary adjustments. The

review committee has the right to recommend dismissal from the program if so deemed.

### BIOLOGY

Degree: Master of Science

Program Director: Donald C. Forester  
410-830-2385

The program is designed to help the student develop proficiency in independent thought, inquiry, and research. The thesis program provides the necessary background and experience for those who plan further study for the Ph.D., whose employment requires an advanced degree in biology, or who desire to teach in community colleges. The non-thesis program is designed for those who want a broader background in biology, and secondary school teachers who want to extend their knowledge and increase their competence in cultivating the spirit of scientific inquiry through coursework and optional research projects.

### Admission Requirements:

1. A supplemental application available from the Department or the Graduate School Office must be filed.
2. Graduate Record Examination scores on the general test must be submitted.
3. Three letters of recommendation from persons familiar with the student's scientific work and aptitude must be sent to the Graduate School Office. The letters should be submitted by former instructors in the student's undergraduate major or from a current supervisor in the field of biology.
4. Interview with the biology graduate program director upon admission.
5. Minimum of 24 s.h. in biology.
6. Allied courses in general and organic chemistry and physics.
7. Grade point average of 3.00 in biology and 3.00 overall GPA is required for full admission. A 2.5 is required for conditional admission.

## Degree Requirements

1. Master of Science with thesis (minimum 36 s.h.)

At least 27 s.h. at the 600 and 700 levels. A thesis based on laboratory and/or field research is required. The final examination is an oral defense of the thesis and a written examination in the area of concentration.

Required courses 16 s.h.

- BIOL 602 Molecular Biology (3)
- BIOL 604 Mechanisms in Animal Physiology (3)
- BIOL 610 Population and Community Biology (3)
- BIOL 797 Graduate Seminar (1)
- BIOL 898 Thesis (6)

Elective courses (20 s.h.)

Selected from courses approved by the student's graduate committee.

Upon approval of the graduate committee, a maximum of six s.h. in allied courses from other departments may be applied toward degree requirements.

*Or*

Master of Science without thesis  
(a minimum 36 s.h.)

At least 27 s.h. must be at the 600, 700 and 800 levels.

Required courses (10 s.h.)

- BIOL 602 Molecular Biology (3)
- BIOL 604 Mechanisms in Animal Physiology (3)
- BIOL 610 Population and Community Biology (3)
- BIOL 797 Graduate Seminar (1 s.h.)

Elective courses (26 s.h.)

Chosen from courses approved for the program of study by the biology graduate committee.

Upon approval of the graduate committee, a maximum of six semester hours in allied courses from other departments may be applied toward degree requirements.

2. Successful completion of the GRE Subject Examination in Biology. This requirement may be fulfilled by:

- a. Obtaining a minimum scaled rating of 60%

*Or*

- b. Obtaining a total of 190 percentile points in the three sub areas (cellular, organism, population).

3. Successful completion of the written master's degree examination.

## COMPUTER SCIENCE

Degree: Master of Science

Program Director: Ali Behforooz  
410-830-2633

This program provides a comprehensive approach to advanced study in computer science. It also prepares professionally responsible individuals to be capable of holding a variety of scientific and technical positions in the area of computing applications. Such jobs are found in research and development departments, in federal, state, and local government agencies; in manufacturing companies; in computer software development companies; and in companies involved in the development of hardware and software products for application in aerospace, biological, chemical, medical, and genetic research environments. Graduates will also be prepared for further work at the doctoral level. The program requires study in at least two of these six areas: software engineering, artificial intelligence, compiler design and theory, database systems design and management, computer systems architecture, and computer operating systems, and data communications and network management.

The main objectives of the program are: 1) to give students the opportunity to study and attain knowledge in current advanced computer science specialties; 2) to develop student ability to apply current computer science problem solving methods and tools to realistic research and industry related problems; 3) to prepare students with tools and knowledge necessary for contributing to the needs of a high technology society through preparation for continued learning; 4) to prepare students for advancement to a more professional role in the high technology sector; and 5) to prepare students for further graduate work in the area of computer science.

**Admission Requirements:**

1. A baccalaureate degree in Computer Science,

*Or*

A baccalaureate degree in any field other than Computer Science, and completion of specified courses to become prepared for graduate work in the program, as determined by the departmental graduate committee.

2. Undergraduate grade point average of 3.0 for full admission or 2.5 for conditional admission. The grade average requirement may be satisfied by a 3.00 average overall, or for the most recent 60 credits on the applicant's baccalaureate record.

**Degree Requirements:**

1. Satisfactory completion of any assigned preparatory courses. (this only applies to those with no undergraduate degree in Computer Science)
2. Satisfactory completion of the requirements for the M.S. in Computer Science, or M.S. in Computer Science with Software Engineering Track, or M.S. in Computer Science with Systems Management Track, or M.S. in Computer Science with Systems Science Track. At least 24 semester hours of degree work must be at 600-800 levels.

**M.S. in Computer Science**

(33 semester hours)

- A. Required courses (6-9 semester hours)

COSC 600 Advanced File and Data Organizations (3)

COSC 897 Computer Science Project (3)

*Or*

COSC 898 Computer Science Thesis (6)

- B. Concentration courses (12 semester hours)

Each student must complete at least 2 of the following 6 sequences:

COSC 612 Software Engineering I (3)

COSC 614 Software Engineering II (3)

COSC 581 Artificial Intelligence (3)

*and one of the following:*

COSC 661 Artificial Intelligence Programming and Adaptive Sys-

tems (3)

COSC 665 Expert System Design and Development (3)

COSC 750 Neural Networks (3)

COSC 553 Compiler Design I (3)

COSC 615 Compiler Design II (3)

COSC 578 Database Management Systems I (3)

COSC 657 Database Management Systems II (3)

COSC 519 Operating Systems Principles I (3)

COSC 639 Operating Systems II (3)

COSC 650 Data Communications and Computer Networks (3)

COSC 730 Network Management Systems (3)

- C. Elective courses (12-15 semester hours)

Any 500/600/700 level COSC course that is not taken in group B may be counted as an elective course. Note that students may **NOT** count more than 9 credits of 500-level courses toward their graduation requirements.

**M.S. in Computer Science: Software Engineering Track (33 semester hours)**

- A. Required Computer Science Courses (18-21 semester hours)

COSC 600 Advanced File and Data Organization (3)

COSC 612 Software Engineering I (3)

COSC 614 Software Engineering II (3)

COSC 716 Object-Oriented Methodology (3)

COSC 6XXSoftware Project Management (3)

COSC 897 Computer Science Project (3)

*Or*

COSC 898 Computer Science Thesis (6)  
*and one of the following sequences*

COSC 519 Operating Systems I (3)

COSC 639 Operating Systems II (3)

COSC 578 Database Management I (3)

COSC 657 Database Management II (3)

COSC 581 Artificial Intelligence (3)

*and one of the following:*

COSC 661 Artificial Intelligence Programming and Adaptive Systems (3)

COSC 665 Expert System Design and Development (3)

COSC 750 Neural Networks (3)

COSC 650 Data Communications & Computer Networks (3)

COSC 730 Network Management Systems (3)

B. Electives - Three (or two in case of thesis) courses from the following (6-9 semester hours)

MNGT 605 Decision Support Systems (3)

Any 500/600/700 level COSC course that is not taken in group A may be counted as an elective course. Note that students may **NOT** count more than 9 semester hours of 500-level courses toward their graduation requirements.

**M.S. in Computer Science: Systems Management Track** (33 semester hours)

A. Required Computer Science Courses (15-18 semester hours)

COSC 600 Advanced File and Data Organization (3)

COSC 612 Software Engineering I (3)

COSC 614 Software Engineering II (3)

COSC 897 Computer Science Project (3)  
*Or*

COSC 898 Computer Science Thesis (6)

MNGT607 Information Systems Management (3)

*and one of the following sequences*

COSC 581 Artificial Intelligence (3)

*and one of the following:*

COSC 661 Artificial Intelligence Programming and Adaptive Systems (3)

COSC 665 Expert System Design and Development (3)

COSC 750 Neural Networks (3)

COSC 553 Compiler Design I (3)

COSC 615 Compiler Design II (3)

COSC 578 Database Management I (3)

COSC 657 Database Management II (3)

COSC 519 Operating Systems I (3)

COSC 639 Operating Systems II (3)

*and 2 courses from the following:*

MNGT 605 Decision Support System I (3)

MNGT 606 Project Management (3)

MNGT6XX Quantitative Decision Making (3)

*And more to be added as courses are developed*  
B. Elective courses in Computer Science (3-6 semester hours)

Any 500/600/700 level COSC course that is not taken in group A may be counted as an elective course. Note that students may **NOT** count more than 9 credits of 500-level courses toward their graduation requirements.

**M.S. in Computer Science: Systems Science Track** (33 semester hours)

A. Required Computer Science Courses (21-24 semester hours)

COSC 600 Advanced File and Data Organization (3)

COSC 611 Computer Simulation (3)

COSC 612 Software Engineering I (3)

COSC 614 Software Engineering II (3)

COSC 578 Database Management Systems I (3)

COSC 657 Database Management Systems II (3)

COSC 897 Computer Science Project (3)  
*Or*

COSC 898 Computer Science Thesis (6)

B. Elective courses (at least 9-12 semester hours)

Any 500/600/700 level COSC course that is not taken in group A may be counted as an elective course. Note that students may **NOT** count more than 9 credits of 500 level courses toward their graduation requirements.

C. Students fulfilling the thesis requirement must earn a grade of "B" or better in COSC 600 and satisfactorily complete COSC 898. Students fulfilling the project requirements must earn a grade of "B" or better in COSC 600 and COSC 897. Students may repeat COSC 600 once to achieve a better grade.

**EARLY CHILDHOOD EDUCATION**

Degree: Master of Education

Program Director: Joan Hildebrand

410-830-2460

The program is structured to help teachers and others increase their competence in working in education programs for children from

birth through eight years of age. It is designed to prepare teachers, directors, and supervisors for various education programs for young children such as day care centers, public and private nursery schools, kindergartens, and public schools.

**Admission Requirements:**

- 1. Certification as an early childhood education public school teacher

Or

Certification as an elementary public school teacher plus six semester hours in early childhood education at the undergraduate level

Or

Undergraduate courses in the following areas:

- a. Educational Psychology or Psychology of Learning
- b. Child Growth and Development
- c. Curriculum and Methods in Early Childhood Education

These courses cannot be used to meet part of the formal elective requirements for the degree.

NOTE: Any applicant not certified as an early childhood teacher should be aware that completion of the master's degree does not automatically result in state certification. Non-certified applicants should contact their advisors prior to enrolling in any coursework.

- 2. A minimum GPA of 3.00 is required for full admission and 2.75 for conditional admission to the program.

**Degree Requirements**

- 1. Completion of required prerequisite courses.

- 2. Plan A: Master of Education with thesis (minimum 33 s.h.)

- a. Required courses (18 s.h.)

EDUC 601 Educational ideas in Historical Perspective (3)

EDUC 761 Research in Education (3)

ECED 898 Master's Thesis in Early Childhood Education (6)

ECED 609 Growth and Development

of Young Children (3)

ECED 655 Curriculum Development in Early Childhood (3)

- b. Elective courses (15 s.h.)

Twelve semester hours may be earned in departments other than education with the approval of the program director.

Selection of courses should be made with the advice and approval of the program director. Each program of study is designed to meet the needs and interest of the individual student.

At least 9 semester hours must be selected from courses numbered 600 to 799.

Or

Plan B: Master of Education without thesis (minimum 33 s.h.)

- a. Required Courses (15 s.h.)

EDUC 601 Educational Ideas in Historical Perspective (3)

EDUC 773 Seminar in Early Childhood Education (3)

EDUC 761 Research in Education (3)

ECED 609 Growth and Development of Young Children (3)

ECED 665 Curriculum Development in Early Childhood (3)

- b. Elective courses (18 s.h.)

Twelve semester hours may be earned in departments other than education with the approval of the program director.

Selection of courses should be made with the advice and approval of the program director. Each program of study is designed to meet the needs and interest of the individual student.

At least 9 semester hours must be selected from the courses numbered 600 to 799.

with the grade of "A" or "B" (The course may be repeated once)

- 3. All students must complete ECED 773 with the grade of "A" or "B" (The course may be repeated once)

Or

successfully complete EDUC 898, thesis.

## ELEMENTARY EDUCATION

Degree: Master of Education

Program Director: Roxana Della Vecchia

410-830-2422

A program may be developed which includes one of the following emphases: curriculum development, reading, educational leadership, and the exceptional child.

In order to enable the in-service teacher to continue progress toward the achievement of academic and professional goals, the degree program is designed to assist graduate students to achieve the following: (1) assess their level of competency as teachers and to build upon their educational and professional experience; (2) provide avenues through which individuals may continue to grow in understanding of, involvement in, and appreciation for the emerging society; (3) help students to extend teaching competencies to new levels of development; (4) encourage a spirit of inquiry and develop research skills useful in continuing study about teaching and learning; (5) help students acquire an increased understanding of human growth and development; and (6) guide students toward understanding their roles as agents of change within the educational enterprise.

## Admission Requirements

1. Certification as an elementary public school teacher

*Or*

Undergraduate courses in the following areas (total: 12 s.h.)

- a. Educational Psychology or Human Growth and Development (3)
  - b. Organization and Curriculum of the Elementary School (6)
  - c. Three semester hours chosen from the following areas:  
 History of Education  
 Foundations of Education  
 Philosophy of Education  
 Sociology of Education
2. A minimum undergraduate GPA of 2.75 is required for conditional admission to the program and 3.0 for full admission.

NOTE: Any applicant not certified as an elementary teacher should be aware that completion of the master's degree is not accompanied by automatic state certification. Non-certified applicants should contact their advisors prior to enrolling for any coursework.

## Degree Requirements:

1. Completion of required prerequisite courses.
2. Plan A: Master of Education with thesis (minimum 33 s.h.)

- a. Required Courses (15 s.h.)

EDUC 601 Educational Ideas in Historical Perspective (3)

EDUC 761 Research in Education (3)

ELED 665 Theory and Practice of Curriculum Development in the Elementary School (3)

ELED 898 Master's Thesis in Elementary Education (6)

- b. Elective Courses (18 s.h.)

A maximum of nine semester hours of electives may be at the 500 level.

Nine semester hours of electives must be selected from the following group:

ELED 511 Staff Development and Leadership in the Elementary School (3)

ELED 529 Methods and Principles of Reading Instruction (3)

ELED 601 Developing Critical, Creative and Problem Solving Thinking (3)

ELED 611 Reading and Other Language Arts in the Elementary School -Advanced (3)

ELED 613 Psycho linguistics and Reading Comprehension (3)

ELED 621 Diagnosis and Prescription for Learning Difficulties (3)

ELED 623 Diagnosis and Prescription for Learning Difficulties Advanced (3)

ELED 631 Educating the Gifted (3)

ELED 633 Reading and Language Arts for Gifted Students (3)

ELED 640 Discipline and Management in the Elementary School (3)

ELED 647 The Teaching Process: Elementary Education (3)

ELED 648 Individualizing Learning in the Elementary School (3)

ELED 661 Humanizing the Curriculum (3)

ELED 685 Seminar in Elementary School Social Studies (3)

ELED 716 The Administration of the Elementary School (3)

ELED 781 Seminar in Elementary Supervision (3)

Nine semester hours of electives are selected in consultation with the student's advisor.

*Or*

Plan B: Master of Education without thesis (minimum 33 s.h.)

a. Required Courses (12 s.h.)

EDUC 601 Educational Ideas in Historical Perspective (3)

EDUC 665 Theory and Practice of Curriculum Development in the Elementary School (3)

EDUC 761 Research in Education (3)

EDUC 775 Seminar in Elementary Education (3)

b. Elective Courses (21 s.h.) A maximum of nine semester hours of electives may be at the 500 level

Nine semester hours of electives must be selected from the following group.

ELED 511 Staff Development and Leadership in the Elementary School (3)

ELED 529 Methods and Principles of Reading Instruction (3)

ELED 601 Developing Critical, Creative and Problem Solving Thinking (3)

ELED 611 Reading and Other Language Arts in the Elementary School - Advanced (3)

ELED 613 Psycholinguistics and Reading Instruction (3)

ELED 621 Diagnosis and Prescription of Learning Difficulties (3)

ELED 631 Educating the Gifted (3)

ELED 633 Reading and Language Arts for Gifted Students (3)

ELED 640 Discipline and Management in the Elementary School (3)

ELED 647 The Teaching Process: Elementary Education (3)

ELED 661 Humanizing the Curriculum (3)

ELED 685 Seminar in Elementary School Social Studies (3)

ELED 716 The Administration of the Elementary School (3)

ELED 781 Seminar in Elementary Supervision (3)

Twelve semester hours of electives are selected in consultation with the student's advisor.

3. All students must complete ELED 775 with the grade of "A" or "B" (the course may be repeated once)

*Or*

successfully complete ELED 898, thesis.

## READING

Degree: Master of Education

Program Director: A. Karen Blair

410-830-2348

The Master of Education in Reading is designed to prepare reading professionals to improve literacy at all levels. More specifically, the program is structured to prepare degree candidates to conduct diagnostic reading evaluations and design instructional programs based on those evaluations; to serve as reading resource teachers; to conduct in-service workshops on topics related to reading; to supervise school or workplace reading programs; and to conduct research in reading and related areas.

The program provides students with a variety of courses in theory and research, as well as practical experience. Unlike reading personnel of the past who were primarily corrective reading teachers in public school settings, reading specialists of today are found in public and private schools, reading clinics, colleges and universities, other institutional settings, and the business community. The program is ideal for

teachers who choose to improve their career opportunities by earning an additional certification as reading specialist K-12.

### Admission Requirements:

1. A bachelor's degree from an accredited college or university.
2. A 2.75 GPA is required for conditional admission and 3.0 for full admission.

### Degree Requirements:

1. Course Requirements (minimum 33 s.h.)
  - a. Required reading courses (24 s.h.)
    - REED 601 Reading Theory and Practice (3)
    - REED 609 Reading Assessment (3)
    - REED 621 Reading Disabilities (3)
    - REED 626 Clinic Internship in Reading (3)
    - REED 663 Literature Based Instruction in the Language Arts (3)
    - REED 665 Teaching Reading and Writing in the Content Areas K-12 (3)
    - REED 726 Advanced Internship in Reading (3)
    - REED 729 Seminar in Reading (3)
  - b. Elective Courses (9 s.h.)

There is considerable flexibility in elective course selection in order to meet the unique program needs of individual candidates. Suggested courses include (but are not limited to) the following:

- EDUC517 Children's Literature (3)
- EDUC560 Teaching in a Multi-cultural/Multiethnic Society (3)
- ELED 611 Reading and Other Language Arts in the Elementary School - Advanced (3)
- ELED 613 Psycho linguistics and Reading Instruction (3)
- ELED 623 Diagnosis and Prescription for Learning Difficulties (3)
- ELED 633 Reading and Language Arts for Gifted Students (3)
- PSYC 611 Developmental Psychology (3)
- REED 622 Corrective Reading (3)
- REED 623 Evaluation of Reading Research (3)
- REED 624 Methods and Materials for Teaching Reading in Higher Education (3)
- SCED 518 Young Adult Literature (3)

SCED 557 Methods of Teaching English as a Second Language (3)

SCED 560 Teaching Reading in the Secondary School (3)

SCED 605 Theory Research and Practice in Teaching Composition (3)

SCED 611 Inclusion/Integration Strategies for Special Needs Adolescents (3)

SCED 625 Teaching in the Middle School (3)

SPED 637 Mainstreaming for the Classroom Teacher (3)

2. Program Exit Requirements  
Students must earn the grade of "A" or "B" in REED 726 and REED 729. Each course may be repeated once, if necessary. Students not earning an "A" or "B" in each course are dismissed from the program.

### SECONDARY EDUCATION

Degree: Master of Education

Program Director: Margaret Kiley

410-830-3184

The program is designed to meet the needs of teachers and educators seeking advanced study in secondary curriculum, administration and supervision, special needs learning reading, teaching strategies and adult education. Advanced work in a variety of subject fields may be taken to meet individual needs.

### Admission Requirements:

1. Certification as a secondary public school teacher

*Or*

Courses in the areas required for certification by the Maryland State Department of Education

*Or*

Approval of Secondary Education Graduate Committee.

2. A grade point average of 2.75 is required for conditional admission (3.0 for full admission).

**Degree Requirements:**

## 1. Education

Non-Thesis Plan (minimum 33 s.h.)

## a. Required courses (18 s.h.)

EDUC601 Educational Ideas in Historical Perspective (3)

EDUC605 Research and Information Technology (3)

EDUC761 Research in Education (3)

SCED 647 Advanced Teaching and Learning Processes (3)

SCED 741 Curriculum Development in the Secondary School (3)

SCED 781 Research Seminar in Secondary and Adult Education (3)

## b. Elective courses (15 s.h.) At least nine semester hours must be selected from courses numbered 600 to 799. All electives are planned in terms of the needs and goals of the individual student and must be approved by the advisor.

Thesis Plan (minimum 33 s.h.)

## a. Required courses (21 s.h.)

EDUC 601 Educational Ideas in Historical Perspective (3)

EDUC 605 Research and Information Technology (3)

EDUC 761 Research in Education (3)

SCED 647 Advanced Teaching and Learning Processes, Secondary (3)

SCED 741 Curriculum Development in the Secondary School (3)

SCED 898 Master's Thesis in Secondary Education (6)

## b. Elective courses (12 s.h.)

At least three s.h. must be selected from courses numbered 600 to 799. All electives are planned in terms of the needs and goals of the individual student and must be approved by the advisor.

## 2. All students must pass SCED 781 with the grade of "A" or "B" (each course may be repeated once) or successfully complete SCED 898, Thesis.

NOTE: Any applicant not certified as a secondary teacher should be aware that comple-

tion of the master's degree is not accompanied by automatic state certification. Non-certified applicants should contact their advisors prior to enrolling for any coursework.

**GEOGRAPHY AND ENVIRONMENTAL PLANNING**

Degree: Master of Arts

Program Director: Kent Barnes

410-830-3462

The program prepares graduates for a variety of spatially oriented applied positions in private business and governmental agencies and for doctoral programs. The program develops a broad knowledge of physical and human geography as well as the ability to synthesize spatial information from a number of fields.

**Admission Requirements:**

## 1. A bachelor's degree.

*Or*

A minimum of 18 semester hours or an academic minor in geography, with at least a 3.0 average in all geography courses.

## 2. Two letters of recommendation

## 3. A one to two page essay discussing career goals and the planned emphasis with the program.

## 4. A minimum undergraduate GPA of 3.0 is required for full admission to the program and 2.75 is required for conditional admission.

## 5. Completed application and admission credential must meet deadlines of March 1 for fall and October 1 for spring. Admission is extended on a space available basis to applicants deemed most qualified on the basis of their credentials.

**Degree Requirements:**

## 1. Evidence of at least four semesters of college-level competency in one foreign language or evidence of quantitative competency. Successful completion of GEOG 375/516, Quantitative Methods in Geography (or an approved equivalent), plus at least one other approved course in computer techniques are assumed to constitute quantitative competency.

2. All degree candidates must meet with their academic advisors to file intended programs of study. This should be done prior to, or during, the first semester of coursework. The program can be amended in consultation with the advisor.

3. Students who have not had GEOG 401, (Growth of Geographic Thought) or its equivalent must take GEOG 551, (Growth of Geographic Thought) as a part of their degree program.

4. All students must satisfactorily complete a departmental Advancement to Degree Candidacy Examination before the end of their second semester of graduate degree work. The examination will assess the student's basic knowledge of both physical and human geography. The exam may be repeated once but must be passed before further coursework can be taken. A second failure will result in dismissal from the program.

5. Plan A: Master of Arts with thesis (minimum 36 s.h.)

a. Required courses (12 s.h.)

GEOG 601 Geographic Methodology and Techniques: Trends and Prospects (3)  
(should be taken within the first year of the degree program).

GEOG 621 Research Techniques (3)

GEOG 898 Thesis (6)

b. Planned elective courses (24 s.h.)

*Or*

Plan B: Master of Arts without thesis (minimum 36 s.h.)

a. Required Courses (6 s.h.)

GEOG 601 Geographic Methodology and Techniques: Trends and Prospects (3) (should be taken within the first year in the degree program).

GEOG 621 Research Techniques (3)

b. Elective Courses (30 s.h.)

The non-thesis option requires the writing of a research paper on a topic approved by the graduate director and presentation of the research paper before a departmental committee or at a departmentally approved professional meeting.

The MA program in Geography and Environmental Planning has two tracks: Track I, Geography, and Track II, Environmental Planning. Each track has a thesis and a non-thesis option. Students in the Environmental Planning track must select at least one half of their elective from planning courses.

## HEALTH SCIENCE

Degree: Master of Science

Program Director: Susan Radius

410-830-2637

Towson University offers a three-concentration program with specializations in school health, community health education and administration. Upon completion of the degree program, the student will have acquired knowledge and understanding of the facts, theories and principles basic to the science of school health, community health, or administration in health services as well as in supporting behavioral, sociological and/or educational areas.

The student entering the school health concentration can consider such future employment possibilities as classroom health teacher, supervisor or director of the health science program within a school system, health education media specialist, program evaluation specialist within a school system, continuing education and school personnel department.

A graduate of the community health education concentration may pursue a career as a health education specialist in a variety of public and private sector agencies. Students holding current credentials in pharmacy, nursing, dentistry, dietetics and other professions may wish to combine their skills from prior training, and redirect their careers toward community education related to their specific prior training. Because the program provides professional training in public health and administrative skills, students may focus on such areas as program planning, evaluation, patient education, work-site health promotion, and others.

A graduate of the program with the administration concentration is prepared for positions

in public health that require sound backgrounds in both public health and administration.

### Admission Requirements:

#### School Health Education and Community Health Concentrations

1. An undergraduate degree in a health science field (e.g., nursing, health education, environmental studies, psychology)

*Or*

Substantial coursework in health and related sciences and/or field experiences and or continuous employment as determined by the graduate program director of the health science department.

2. A grade point average of 2.75 is required for conditional admission (3.0 for full admission).

### Degree Requirements:

1. Completion of required prerequisite courses.
2. Completion of a minimum of 33 to 36 semester hours of degree work. The minimum number of semester hours required varies according to concentration.

#### School Health Education

- a. Health Science Core - 15 s.h. required  
 HLTH 601 School Health Problem (3)  
 HLTH 615 Community Health: Quantitative and Qualitative Elements (3)  
 HLTH 625 Research Methods (3)  
 HLTH 639 Education and Training in Health Care (3)  
 HLTH 785 Graduate Seminar (3)
- b. Content Health Core - 6 s.h. electives (3 s.h. if thesis is elected) from:  
 HLTH 501 Teaching about Drugs and Sex (3)  
 HLTH 505 Drugs in Our Culture (3)  
 HLTH 551 Ecological Aspects of Health (3)  
 HLTH 637 Leadership Skills (3)  
 HLTH 643 Health Education: Curriculum Development and Supervision (3)  
 HLTH 649 Program Evaluation (3)

*Or*

other approved HLTH electives

- c. Elective Health Core - 3 s.h. if HLTH 897 is elected
- d. Support Core - 9 s.h.
- e. Final Project/Thesis or 3 s.h. HLTH elective  
 HLTH 897 Graduate Project in Health Science (3) or ap-approved HLTH elective (3)  
 HLTH 898 Master's Thesis in Health (6)

#### Community Health

- a. Health Science Core - 18 s.h. required  
 HLTH 601 School Health Problems (3)  
 HLTH 615 Community Health: Quantitative and Qualitative Elements (3)  
 HLTH 625 Research Methods (3)  
 HLTH 631 Program Planning in Health Education (3)  
 HLTH 639 Education and Training in Health Care (3)  
 HLTH 785 Graduate Seminar (3)
- b. Content Health Core - 6. s.h. (3 s.h. if thesis is elected) electives from:  
 HLTH 617 Health Administration (3)  
 HLTH 633 Health Care Systems (3)  
 HLTH 637 Leadership Skills (3)  
 HLTH 641 Patient Education (3)  
 HLTH 645 Health Care Policy (3)  
 HLTH 651 Planning and Marketing health in Business and Industry (3)  
 HLTH 649 Program Evaluation (3)

*Or*

other approved HLTH electives

- c. Support Core - 9 s.h.
- d. Final Project/Thesis or 3 s.h. HLTH elective  
 HLTH 897 Graduate Project in health Science (3) or approved HLTH elective (3)  
 HLTH 898 Master's Thesis in Health (6)

#### Administration

- a. Health Science Core - 12 s.h. required  
 HLTH 615 Community Health: Quantitative and Qualitative Elements (3)  
 HLTH 625 Research Methods (3)  
 HLTH 639 Education and Training in Health Care (3)  
 HLTH 785 Graduate Seminar (3)

- b. Content Support Health Core - 21 s.h. (18 s.h. if thesis is elected) required from:  
 HLTH 617 Health Administration (3)  
 HLTH 631 Program Planning in Health Education (3)  
 HLTH 633 Health Care Systems (3)  
 HLTH 637 Leadership Skills (3)  
 HLTH 641 Patient Education (3)  
 HLTH 645 Health Care Policy (3)  
 HLTH 647 Health Care Financial Management (3)  
 HLTH 649 Program Evaluation (3) or approved HLTH elective (3)  
 HLTH 651 Planning and Marketing Health in Business and Industry (3)

Or

other approved HLTH electives

- c. Final Project/Thesis or 3 s.h. HLTH elective

HLTH 897 Graduate Project in Health Science (3) or approved HLTH elective (3)

HLTH 898 Master's Thesis in Health (6)

3. All students must complete a three course requirement (HLTH 615, HLTH 639 and a third course selected with advising) with a grade point average of 3.0 in the first attempt at these courses. Students who attain a 3.0 in the courses, but who earn a "C" in one of the courses must register for HLTH 691-Directed Readings, with a Health Science faculty member in the area in which the "C" grade was earned. The grade of "B" or higher in HLTH 691 must be earned. Students who do not earn a 3.0 or higher in the three required courses or who earn less than a "B" in HLTH 691 are academically dismissed from the program.

sary for individuals and organizations to compete in a global economy and adapt to a dynamic environment. The program is designed to address issues related to employee development within the context of business, government and non-profit organizations.

The program is organized around four core areas: Administration/Management, Employee Relations, Program Design, and Research. The four core areas integrate theories, principles, and methodologies from the disciplines of adult education, communications, health sciences, instructional technology, management and psychology.

Students who wish to enhance their coursework with practical experience will have the opportunity to apply for an internship. Only a limited number of students will be chosen due to the competitive nature of the selection process.

Graduates of the program will have the academic preparation to pursue careers in employee development, employee relations, training, program administration, and management.

### Admission Requirements:

1. A 3.0 undergraduate average is required for full admission.
2. A 2.75 undergraduate average is required for conditional admission.
3. Two typewritten letters of recommendation on official letterhead from individuals who can attest to the applicant's academic background and/or professional experience and personal characteristics related to interpersonal skills for admission to the program.
4. An admission essay in which the applicant discusses his/her reasons for seeking admission to the program and how the program will meet professional and personal aspirations.

### Degree Requirements:

1. Required Core:(12 s.h.)  
 MNGT 601 Administrative Theory and Practice (3)  
 Or  
 PSYC 642 Organizational Behavior (3)  
 Or  
 PSYC 627 Seminar in Training and Development (3)

## HUMAN RESOURCE DEVELOPMENT

Degree: Master of Science  
 Program Director: Larry Froman  
 410-830-2678

The Master of Science in Human Resource Development (HRD) is a multi-disciplinary program with an emphasis on change neces-

PSYC 641 Change in the Workplace (3)  
 ISTC 667 Instructional Development (3)

2. **Elective Courses:** Students must complete eight courses (24 semester hours). Fifteen semester hours of electives must be taken at the 600-700 level. At least one course must be taken from each of the following groups:

### Group 1: Administration/Management

COMM 519 Organizational Communication (3)  
 COSC 605 Human Factors and Human Computer Interaction (3)  
 ECON 541 Labor Economics and Labor Relations (3)  
 HLTH 541 Legal & Ethical Issues in Health Administration (3)  
 HLTH 617 Health Administration (3)  
 HLTH 627 Health & Worker Performance (3)  
 HLTH 637 Skill Development/Leadership in the Health Care Setting (3)  
 HLTH 647 Health Care Financial Management (3)  
 MCOM 615 Administrative and Professional Communication (3)  
 MNGT 561 Total Quality Management (3)  
 MNGT 601 Administrative Theory and Practice (3)  
 MNGT 603 Human Resource Management in a Global Economy (3)  
 MNGT 604 Labor Relations (3)  
 MNGT 608 Project Management (3)  
 MNGT 609 Business & Society (3)  
 MNGT 695 Independent Study in Management (3)  
 PSYC 629 Personnel Selection and Performance Management (3)  
 PSYC 642 Organizational Behavior (3)  
 SOCI 531 Organizations (3)  
 WRIT 619 Communication in the Profit/Non-Profit Sectors (3)  
 WRIT 621 Business Writing (3)  
 WRIT 733 Communication Management (3)  
 PSYC 679 Special Topics: Interviewing Techniques (3)  
 PSYC 695 Independent Study (3)

### Group 2: Employee Relations

ADED 585 Adult Education (3)  
 COMM 601 Theories and Research in Intercultural Communication (3)  
 EDUC 560 Teaching in a Multicultural/Multiethnic Society (3)  
 HLTH 627 Health & Worker Performance (3)  
 MNGT 602 Conflict Resolution in Commerce and Industry (3)  
 PSYC 515 Motivation (3)  
 PSYC 524 Social Psychology (3)  
 PSYC 567 Midlife Development (3)  
 PSYC 603 Human Learning (3)  
 PSYC 605 Counseling Techniques (3)  
 PSYC 606 Career Development (3)  
 PSYC 611 Developmental Psychology (3)  
 PSYC 637 Counseling Strategies for Drug and Alcohol Abuse (3)  
 PSYC 644 Team Building  
 SOCI 543 Minority Groups (3)  
 SOCI 550 Sociology of Aging (3)  
 SOCI 559 Social Gerontology (3)  
 WMST 535 Women, Work, and Family (3)

### Group 3: Program Planning, Design and Evaluation

COMM 518 Communication Training and Development (3)  
 COMM 522 Conference and Meeting Management (3)  
 COSC 605 Human Factors and Human-Computer Interactions (3)  
 EDUC 695 Individualized Study (3-6)  
 EDUC 761 Research in Education (3)  
 HLTH 631 Program Planning (3)  
 HLTH 639 Education and Training in Health Care (3)  
 HLTH 649 Program Evaluation (3)  
 HLTH 651 Planning and Marketing Health Business and Industry (3)  
 HLTH 695 Independent Study (3)  
 ISTC 541 Computer Technology and Utilization (3)  
 ISTC 635 Theory and Design of Interactive Video (3)  
 ISTC 663 Applied Psychology of Learning (3)  
 ISTC 674 Special Topics: Distance Education (3)

- ISTC 687 Computer Assisted Instruction (3)  
 ISTC 695 Independent Study in Instructional Technology (3)  
 MNGT 695 Independent Study (3)  
 PSYC 695 Independent Study (3)  
 PSYC 511 Tests and Measurement (3)  
 PSYC 518 Computer Impact on Psychology (3)  
 PSYC 679 Special Topics: Professional Development in HRD (1-3)  
 PSYC 679 Special Topics: Research in HRD (1-3)  
 SCED 627 Training Strategies in the Workplace (3)  
 WRIT 621 Business Writing (3)  
 WRIT 691 Research Techniques in Professional Writing (3)  
 WRIT 729 Corporate Communications Consulting (3)

3. All students are required to complete the written comprehensive examination in HRD. Students must complete a minimum of 18 semester hours before taking the examination.

## INFORMATION TECHNOLOGY MANAGEMENT

Degree: Master of Science  
 Program Director: Barin Nag  
 410-830-2693

The program has been created specifically to meet the high demand for information technologists with the knowledge and skills to manage projects and demonstrate business leadership. The program is designed for experienced information technicians to enhance skills in business management, leadership and communication, as well as to update their knowledge of information technology developments. The degree is an excellent credential for technical specialists seeking greater career mobility by entering management.

Degree candidates complete a minimum of 36 credit hours of approved graduate courses, including a 15-credit required core. The curriculum permits degree candidates to choose a concentration (15-18 credits) from one of four

areas: Information Technology, Information Systems Project Management, Operations Management, or a Customized Concentration. Degree candidates may pursue either a thesis option (6 credits) or project option (3 credits).

The M.S. in Information Technology Management is a collaborative program of Towson University and the University of Baltimore. Students are required to take courses at both universities.

**NOTE:** Because of the collaboration between universities, tuition and fees for this degree program differ from other Towson programs. Contact the Graduate School Office for details.

## Admissions Requirements

Successful candidates for admission have:

1. A bachelor's degree
2. Three years of active work experience in the computer information systems field, including: computer programming, systems development projects, and management of personal computers
3. Three credit hours of course work in statistics and accounting
4. A minimum 3.0 GPA for full admission.

Each candidate's application will be evaluated by an advisor; candidates who do not meet the requirements may be required to take remedial preparatory courses before entering the program.

## Degree Requirements

Many courses are offered at both Towson University and University of Baltimore; in those instances, only the Towson courses are listed here. An incomplete course number (6xx) indicates a course that was still in development when the Graduate Catalog went to press. For additional information, contact the Graduate School Office, 410-830-2501.

1. Core courses (15 s.h.)  
 ACCT 6XX Management Accounting Systems (3)  
 COSC 6XX Project Planning and Proposal Design (3)  
 MNGT 6XX/  
 COSC 6XX Quantitative Methods in De-

cision Making (3)

MNGT 607 Information Systems Management (3)

MNGT 752 Total Quality Management (3)

## 2. Program Concentration Courses (15-18 s.h.)

### a. Information Technology

This concentration prepares graduates to manage technology assessment and evaluation, technology transfer and maintenance, technology planning and acquisition.

COSC 650 Data Communication and Computer Networks (3)

COSC 578 Database Management Systems (3)  
and three electives

### b. Information Systems Project Management

Students in this concentration prepare to manage the resources needed to develop an information system within an organization.

MNGT 606 Project Management (3)

INSS 671 Systems Analysis and Design (University of Baltimore) (3)  
and three electives

### c. Operations Management

This concentration prepares students to analyze problems and opportunities associated with managing operations, particularly in the service area, with special expertise in systems simulation and modeling.

MNGT 6XX Service Operations Management (3)

COSC 611 Computer Simulation (3)  
and three electives

### d. Customized Concentration

Students in this concentration customize, in collaboration with an advisor, a concentration tailored to fit their individual needs. Among the possible topic areas are computer languages, international information systems and networking, information resources management, information systems security, systems engineering management, and strategic management. Students select two required courses and three elective courses with the advisor's approval.

## 3. Master's Thesis or Project

Degree candidates must complete either a research-oriented Master's thesis (6) or a

Project (3) that solves a problem in the workplace. Candidates choosing the project option complete a Business Practicum, during which they apply the concepts and techniques of Information Technology Management for a business client or at the individual's place of employment.

## 4. Electives

With the guidance of a faculty advisor, degree candidates may select from graduate-level courses in Accounting, Computer Science, Information Systems and Science, Management, and Operations Research.

## INSTRUCTIONAL TECHNOLOGY

Degree: Master of Science

Program Director: Gary W. Rosecrans

410-830-2194

Students select one of two concentrations. The first (Instructional Design and Development) offers a flexible program of study designed to develop competencies in instructional design and media-related competencies for those who wish to work in training or instructional settings in business, industry, government, military or medical education. The second (School Library Media) meets the Maryland State Department of Education requirements for the Media Generalist Certification and is designed for students who wish to serve as directors of school library media centers.

## Admission Requirements:

### 1. Concentration I, Instructional Design and Development

Completion of the following course or its equivalent:

ISTC 301 Utilization of Instructional Media (3)

### 2. Concentration II, School Library Media

Completion of the following courses or their equivalents:

PSYC 201 Educational Psychology (3)

SCED 319 Survey of Educational Programs (3)

One of the following:

EDUC 401 Foundations of Education (3)

EDUC 402 History of Education (3)

EDUC 405 Philosophy of Education (3)

Completion of the following courses or their equivalents:

ISTC 301 Utilization of Educational Media (3)

ISTC 471 Reference and Information Sources (3)

ISTC 473 Cataloging and Classifying Media (3)

3. A 2.5 GPA is required for conditional admission and 3.0 for full admission.

## Degree Requirements:

1. Completion of Concentration I or Concentration II courses.

### Concentration I, Instructional Design and Development

Plan A: Master of Science with thesis (minimum 36 s.h.)

a. Required courses (30 s.h.)

ISTC 541 Computer Technology and Utilization (3)

ISTC 633 Instructional Television (3)

ISTC 635 Theory and Design of Interactive Video (3)

ISTC 655 Media Design and Production I (3)

ISTC 663 Applied Psychology of Learning (3)

ISTC 667 Instructional Development (3)

ISTC 685 Research in Instructional Technology (3)

ISTC 687 Computer Assisted Instruction (3)

ISTC 898 Master's Thesis in Instructional Technology (6)

b. Elective courses (6 s.h.)

Selection of elective courses must be made with the advice and approval of a program advisor. The elective hours may be in instructional technology. Three semester hours may be outside the department.

c. At least 27 s.h. must be at the 600-700 levels.

Plan B: Master of Science without thesis (minimum 36 s.h.)

a. Required courses except for thesis are identical to plan A.

b. Elective courses (12 s.h.)

Selection of elective courses must be made

with the advice and approval of a program advisor. All elective hours may be in instructional technology. With prior permission based upon a written rationale, up to 9 semester hours may be outside the department. c. At least 27 s.h. must be at the 600-700 levels.

### Concentration II, School Library Media

Plan A: Master of Science with thesis (minimum 36 s.h.)

a. Required courses: (27 or 30 s.h.)

EDUC517 Children's Literature (3)

ISTC 601 Organization and Administration of Media Center Programs (3)

ISTC 615 Media Selection (3)

ISTC 655 Media Design and Production I (3)

ISTC 667 Instructional Development (3)

ISTC 685 Research in Instructional Technology (3)

ISTC 789 Graduate Practicum in Instructional Technology (3 or 6)

ISTC 898 Master's Thesis in Instructional Technology (6)

SCED 518 Young Adult Literature (3)

SPED 637 Main streaming for the Classroom Teacher (3)

b. Elective courses (0-3 s.h.)

c. At least 27 semester hours of courses must be at the 600 and 700 levels.

Plan B: Master of Science without thesis (minimum 36 s.h.)

a. Required courses are identical to Plan A, except for the deletion of ISTC 898, Master's Thesis in Instructional Technology (6)

b. Elective courses (6-9 s.h.)

c. At least 27 semester hours of courses must be at the 600 and 700 levels.

2. ISTC 685 must be completed with the grade of "A" or "B". The course may be repeated once.

3. Completion of required prerequisite courses.

## LIBERAL STUDIES

Degree: Master of Arts

Program Director: Paul Miers

The Master of Arts degree program in Liberal Studies is individually designed for each student and offers many options. The program is interdisciplinary, but permits development within a specific discipline if appropriate to the thematic orientation selected by the student.

### Admission Requirements:

1. Grade point average of 3.0 (2.5 for conditional admission).
2. A brief admission essay in which the applicant discusses reasons for entering the program, goals to be achieved, and how the program will meet personal and professional aspirations.

### Degree Requirements:

1. Required core (12 s.h.)

GENL 601 Introductory Seminar in Liberal Studies (3) This course must be taken within the first nine hours of degree work.

A 600/700 level independent study course (3) The topic and discipline must be approved by the student's advisor.

Advanced Writing Course (3)

May be any approved graduate writing course.

GENL 602 Culminating Seminar in Liberal Studies (3)

This course must be taken during the last semester of the degree program.

2. Elective core (24 s.h.)

The elective credits must be approved for the student's program of study in advance of enrollment for the courses.

The electives must be taken from at least three disciplines with a maximum of twelve hours in any one discipline. At least twelve and preferably more of the hours in the elective core must be in liberal arts and science disciplines (anthropology, art, biology, chemistry, dance, English, history, modern languages, mathematics, music, philosophy, physics, political science, psychology, speech, theater). Twelve semester hours of the elective core must

be completed at Towson University. The remaining elective hours may be taken at any of the University System of Maryland schools, Morgan State University, or at Towson University. Courses taken within the elective core must bear a significant relationship to the thematic option that is selected by the student and must be approved by the program director.

3. GENL 601 and 602 must be completed with the grade of "A" or "B" in each. The courses may be repeated once for purposes of grade change.

## MASS COMMUNICATION

Degree: Master of Arts

Program Director: Greg Faller

410-830-3755

The Master of Arts in Mass Communication focuses on the study of human communication and mass media. The department seeks to foster oral, visual, and written communication abilities; improve critical thinking; develop an understanding of human message exchanges, and analyze how mass media influence our social, political, artistic, and cultural existence.

The Master of Arts in Mass Communication serves two kinds of students; those seeking to build career-oriented skills and qualifications, and those who intend to pursue advanced studies. Students have the opportunity to study theory, criticism, research methods and to enhance professional skills appropriate to their career goals.

The program integrates television, public relations, journalism, radio, film communication theory, and organizational communication, emphasizing the interrelationships and interactions of various media. The program also offers some specialization through elective courses.

### Admission Requirements:

1. A bachelor's degree in mass communication  
Or

A minimum of 24 s.h. in mass communication or mass communication related courses

or prior experience in the field approved by graduate program director. The majority of the 24 s.h. must include:

- a. The following courses or their equivalents: MCOM 355, 356, 357, 377; and PSYC 212 or MATH 231
- b. Courses in three of the following areas: communication, film, journalism, public relation, radio, television, English, psychology, or business administration
2. A minimum undergraduate GPA of 2.75 for conditional admission. Conditional admission courses will be the first nine hours of 600-700 level courses taken after application to the program. This includes courses taken during the semester in which the student applies for admission to the program. A student must earn an "A" or "B" in each of these courses to continue in the program. A GPA of 3.0 or higher when applying immediately secures full admission. The Graduate School calculates a GPA on the final 60 hours of undergraduate coursework.
3. A cover letter of intent or area of interest.
4. A resume
5. One letter of recommendation.
6. Application deadline of March 1 for Fall admission and October 1 for Spring admission.

### Degree Requirements:

1. Completion of required prerequisite courses.
2. Plan A: Master of Arts with thesis (33 s.h.)
  - a. Completion of a total 27 s.h. of coursework plus thesis (6 s.h.). A minimum of 24 s.h. (Including thesis) must be earned at the 600-800 levels.
  - b. Required courses (18 s.h.)
 

MCOM601Media Writing (3) should be taken within the first 15 hours of degree work

MCOM621 Mass Media Law and Regulation (3)

MCOM631 Research Methods in Mass Communication (3) should be taken within the first 15 hours of degree work

MCOM 633Theories of Mass Communication (3) should be taken within the first 15 hours of degree work

MCOM898 Thesis (6)

c. Elective courses (15 s.h.)

See recommended course groupings

Each student must pass an advancement to candidacy examination.

*Or*

Plan B: Master of Arts without thesis (33 s.h.)

a. Completion of a total of 33 s.h. of coursework

A minimum of 24 s.h. must be earned at the 600-800 levels.

b. Required courses except for thesis are identical to Plan A.

c. Elective courses (21 s.h.)

Each student must pass an advancement to candidacy examination and a comprehensive examination AND must participate in an exit interview.

*Courses taken outside the department:* In either Plan A or Plan B, with departmental approval, a maximum of six semester hours of elective courses may be selected in other departments. Written consent of the student's adviser and the program director is required for 600-800 level courses. 500 level courses will be accepted only in exceptional cases and when the course in question is clearly central to the student's educational and career objectives. For these 500 level courses, the approval of a majority of the graduate faculty is needed.

*Independent format courses:* A maximum of six semester hours of independent study and internships may be counted toward the degree.

Recommended Course Groupings (Elective Courses)

1. Public Relations and Organizational Communication
  - COMM518 Communication Training and Development
  - COMM519 Organizational Communication
  - COMM520 Communication in the Legal Process
  - COMM522 Conference and Meeting Management
  - COMM525 Evidence and Credibility
  - COMM601 Theories and Research in Inter-cultural Communication

MCOM551 Public Relations for Non-Profit Organizations

MCOM553 Public Relations Campaigns

MCOM559 Professional Issues in Public Relations

MCOM615 Administrative and Professional Communication

MCOM617 International Communication

MCOM635 Journalism Ethics

MCOM651 Media and Politics

MCOM670-

673 Special Topics in Mass Communication

MCOM682 Issues Management

MCOM685 Seminar in Media Production: Public Relations

COMM795 Independent Study in Communication Studies

MCOM713 Public Relations Theory

MCOM783 Internship in Public Relations

MCOM795 Independent Study in Mass Communication

MCOM897 Graduate Project in Mass Communication

MCOM898 Thesis

## 2. Mass Media Production and Writing

MCOM 536 Video and Film Editing

MCOM573 Film making II

MCOM575 Film Workshop

MCOM603 Criticism in Mass Media

MCOM617 International Communication

MCOM625 Writing for the Visual Media

MCOM635 Journalism Ethics

MCOM670-

673 Special Topics in Mass Communication

MCOM680 Seminar in Media Management: Electronic Media Management and Operations

MCOM686 Seminar in Media Production: Television

MCOM688 Seminar in Media Production: Film

MCOM701 Media Interrelationships

MCOM717 International Film and Television

MCOM785 Internship in Film

MCOM787 Internship in Electronic Media

MCOM795 Independent Study in Mass Communication

MCOM897 Graduate Project in Mass Communication

MCOM898 Thesis

## APPLIED AND INDUSTRIAL MATHEMATICS

Degree: Master of Science

Program Director: Raouf Boules

410-830-3683

This program is intended to prepare individuals in areas of mathematics that deal with the problems typically encountered in business and industry. The program provides students with a broad knowledge in applied mathematics with an emphasis on areas with the highest demand in the high-technology sector. Examples of these areas are mathematical modeling, numerical methods and scientific computation, statistics, operations research and spectral analysis. Numerical, computational and algorithmic approaches to problem solving are stressed throughout the program. Graduates of this program will also be prepared for further work at the doctoral level.

A unique feature of the program is the requirement of a successful completion of a two-semester internship (6 credits total). This internship can be completed in cooperation with one of the department's established industrial partners or at the student's place of employment with appropriate department supervision. Another option for fulfilling the internship requirement is to play a leadership role in one of the projects investigated by the department's Applied Mathematics Laboratory. Typically, these projects are sponsored by business/industry corporations and government agencies. In all of the previously mentioned settings, the internship will involve working on real applied problems that are meaningful to business and industry. Students whose careers are in education may, with the approval of the department's Graduate Program Committee, replace the industrial setting of the internship with an educational setting. This will typically entail the development of original course material stressing applied mathematics and using innovative teaching techniques, for example, interactive texts.

The main objectives of the program are: (1) to prepare individuals who are capable of applying advanced mathematical skills to problems in areas of science, business, and industry; (2) to develop the students' ability to integrate, in a meaningful way, the use of technology in their everyday professional practice; (3) to give educators an opportunity to satisfy their in-service requirements and simultaneously enhance their knowledge of technology and enrich their mathematical backgrounds; (4) to supply students with the mathematical competency necessary for advancement to a more professional role in the high-technology sector; (5) to develop students' reasoning and communication skills for improved service to the high-technology sector; (6) to educate students to solve problems, to work in teams, and to communicate in an interdisciplinary setting; (7) to familiarize students with the recent advances in applied mathematics such as fractal geometry, chaotic dynamics, wavelets, spectral analysis, operations research and stochastic modeling; (8) to prepare students for further graduate work at the doctoral level in applied mathematics; and (9) to enrich the academic culture by providing opportunities for interaction of mathematical and industrial research.

### Admission Requirements:

1. A baccalaureate degree in Mathematics or any other field. The applicant's undergraduate training must have included at least three semesters of calculus, a course in differential equations, and a course in linear algebra. Students with any deficiency in their mathematical background may be admitted conditionally if they are willing to remove such deficiency.
2. A undergraduate grade point average of 3.0 for full admission or 2.5 for conditional admission.
3. For international students whose native language is different from English, English competency must be certified by the achievement of a minimum of 500 on the Test of English as a Foreign Language (TOEFL).

### Degree Requirements:

The student is required to successfully complete a total of ten courses (a minimum of 30 semester hours) as indicated below. A student may transfer up to two graduate-level mathematics courses taken at another institution provided that the transfer is consistent with the Graduate School policy. Students are required to submit a written technical report and to give an oral presentation based on their internship, to the Graduate Program Committee. Satisfactory completion of this summary of the internship experience is one of the requirements for graduation.

1. Required Courses (At least six courses from the List A below. These must include MATH 791 and MATH 792.)

#### LIST A

MATH 632 Computational Stochastic Modeling  
 MATH 633 Queuing Systems  
 MATH 634 Computational Spectral Analysis and Time Series  
 MATH 635 Applied Numerical Analysis  
 MATH 636 Linear and Nonlinear Programming  
 MATH 637 Advanced Topics in Applied Operations Research  
 MATH 651 Mathematics and Fuzzy Logic  
 MATH 671 Chaotic Dynamics and Fractal Geometry  
 MATH 673 Applied Industrial Mathematics I  
 MATH 674 Applied Industrial Mathematics II  
 MATH 677 Advanced Mathematical Modeling  
 MATH 791 Master's Internship I  
 MATH 792 Master's Internship II

2. Elective Courses (One or two courses from List B and up to three courses may be chosen from List C.)

#### LIST B

COSC 554 Introduction to the Theory of Computing  
 COSC 581 Artificial Intelligence  
 COSC 586 Computer Graphics

COSC 600 Advanced File and Data Organization

COSC 611 Computer Simulation

COSC 661 Artificial Intelligence Programming and Adaptive Systems

### LIST C

MATH 525 Methods and Materials for Mathematics Laboratory Instruction

MATH 532 Mathematical Statistics

MATH 533 Applied Regression and Correlation Analysis

MATH 534 Nonparametric Statistical Methods

MATH 538 Life Contingencies I

MATH 539 Life Contingencies II

MATH 543 Applied Analysis of Variance

MATH 546 Statistical Methods in Quality Control

MATH 551 Graph Theory

MATH 563 Linear Algebra

MATH 568 Algebraic Structures

MATH 576 Introductory Real Analysis

MATH 577 Complex Analysis

MATH 579 Advanced Calculus

## **APPLICATIONS OF DALCROZE, ORFF AND KODÁLY**

Certificate

Program Director: Michael Jothén

410-830-2257

The program provides comprehensive training for music education specialists in the teaching methods of Dalcroze, Orff and Kodály. The sequence of courses helps music teachers understand the rationale and curricula of the three methods, and furthers the development of their own musicianship. The sequence of instruction provides students with introductory experiences and then moves toward more sophisticated instructional strategies, musical composition and improvisation. The program culminates in the award of a certificate and may be earned separately from or in conjunction with the Master of Science degree in music education.

## **Admission Requirements:**

A baccalaureate degree with a major in music education or certification as a public school music teacher.

## **Certificate Requirements:**

Completion of fifteen semester hours

MUED 617 Choral workshop in Elementary and Secondary School Music (2)

*Or*

Thirteen hours of workshops in Music Education as follows:

MUED 630 Dalcroze, Orff and Kodály: Principles and Techniques for the Music Classroom - I (2)

MUED 631 Dalcroze, Orff and Kodály: Principles and Techniques for the Music Classroom - II (2)

MUED 633 Orff Techniques (2)

MUED 634 Kodály Techniques (2)

MUED 632 Dalcroze Practices (2)

MUED 635 Dalcroze, Orff, Kodály Pedagogy and Curriculum Development (3)

## **MUSIC EDUCATION**

Degree: Master of Science

Program Director: Michael Jothén

410-830-2257

The Master of Science in Music Education provides a flexible curriculum that allows students to earn up to 15 elective hours in a field of specialization. In consultation with the graduate advisor, students may select a group of courses in which they are interested, such as music education, applied music, music theory, music history, or composition. Students may elect to work concurrently on the Music Certificate in the Applications of Dalcroze, Orff, and Kodály as their area of specialization in the master's degree.

Graduates of this program are usually employed as music teachers in public or private schools. They work in the areas of vocal-general and/or instrumental music. Others are employed as private teachers or administrators, or as church musicians.

1. A bachelors degree in music education or music

*Or*

Certification as a public school music teacher

2. A 2.5 GPA is required for conditional admission, and 3.0 for full admission
3. Completion of a music theory and history advising examination.

### **Degree Requirements:**

1. Plan A: Master of Science in Music Education with thesis (minimum 34 s.h.)  
Maximum of 9 semester hours at the 500 level.

a. Required courses (21 s.h.)

MUED 601 Current Trends in Music Education (3)

MUED 661 Seminar in Instrumental Music (3)

*Or*

MUED 662 Seminar in Choral Music (3)

MUED 695 Research Methods in Music and Music Education (3)

MUSA Performing/Composing Experiences (3)

MUSC History/Literature (3)

MUSC Theory/Composition (3)

MUSC 898 Thesis (6)

*Or*

Plan B: Master of science in music education with graduate project (minimum 34 semester hours). Maximum of 9 semester hours at the 500 level.

a. Required courses (19 s.h.)

Identical to Plan A except for thesis

Student must complete MUSC 897

Graduate Project - Graduate Paper (1)

*Or*

Graduate Project - Recital (1)

*Or*

Graduate Project - Composition (1)

*Or*

Graduate Project - Practicum (1)

- b. Elective Courses Plan A and Plan B

Music Education

MUED 519 Workshop: Aspects of String Teaching (2-6)

MUED 603 Music in Special Education (3)

MUED 621 Workshop: Teaching Guitar in the Classroom (2)

MUED 639 Advanced Workshop in Elementary and Junior High School General Music (2)

MUED 670/

679 Workshops in Music Education (1-3)

#### **History/Literature**

MUSC 501 Music Prior to 1600 (3)

MUSC 502 Music of the Baroque Period (3)

MUSC 503 Music of the Classical Period (3)

MUSC 504 Music of the Romantic Period (3)

MUSC 505 Contemporary Music (3)

MUSC 506 Survey of Solo Voice Literature (3)

MUSC 509 History and Literature of Guitar, Lute, and Vihuela (3)

MUSC 510 Survey of Organ Literature (3)

MUSC 511 Survey of Opera (3)

MUSC 513 Symphonic Literature (3)

MUSC 515 The Concerto (3)

MUSC 517 Piano Literature (3)

MUSC 521 American Music (3)

MUSC 571/

579 Special Topics in Music Literature (3)

MUSC 593 Independent Research in Music Literature (3)

MUSC 671 Special Topics in Music Literature (3)

#### **Theory/Composition**

MUSC 507 Tonal Counterpoint (3)

MUSC 508 Modal Counterpoint (3)

MUSC 527/

528 Jazz Arranging (3,3)

MUSC 531 Advanced Choral and Instrumental Arranging (3)

MUSC 535 Form and Analysis (3)

MUSC 629 Concepts of Music Theory (3)

MUSC 631 Advanced Theory (3)

#### **Performing/Composing Experiences**

MUSC 603 Opera Orchestra (1)

MUSC 609 Opera Workshop (1)

MUSC 613 Clarinet Choir (1)

MUSC 615 Marching Band (1)

MUSC 639 Guitar Ensemble (1)

MUSC 641 Brass Ensemble (1)

MUSC 643 Musical Theatre Orchestra (1)

MUSC 645 Percussion Ensemble (1)

MUSC 647 Saxophone Ensemble (1)  
MUSC 649 Chamber Ensemble (1)  
MUSC 651 Voice Ensemble (1)  
MUSC 653 Woodwind Ensemble (1)  
MUSC 655 Choral Society (1)  
MUSC 657 Jazz Ensemble (1)  
MUSC 659 Early Music Ensemble (1)  
MUSC 663 University Chorale (1)  
MUSC 667 Orchestra (1)  
MUSC 669 Symphonic Band (1)  
MUSA 671/  
690 Private Instruction: Piano, Instrumental, Voice (1-3)  
MUSA 687/  
688 Composition Private Lessons (1-2)

2. Successful completion of the comprehensive examination covering course content in music education.

## MUSIC PERFORMANCE

Degree: Master of Music  
Program Director: Harold Griswold  
410-830-2821

The Master of Music program seeks to develop a high level of musicianship and scholarly skills. It is designed for students who exhibit special talents in performance or composition and have completed sufficient undergraduate courses to meet the requirements for admission. The degree prepares the candidates for careers in teaching, performing, and composing.

### Admission Requirements:

1. A baccalaureate degree in music or music education.
2. A supplemental application available from the Department or the Graduate School Office must be filed.
3. Acceptable evaluation by two persons familiar with the applicants scholarly and music performance and aptitude. Evaluations are completed on the Master of Music degree recommendation form obtained from the department or the Graduate School Office.
4. Acceptable performance on an audition in the student's major performance area. Ap-

5. Acceptable scores on the theory and music history placement test. Students who do not meet minimal requirements may be required to enroll in prescribed courses.
6. A 2.5 is required for conditional admission and 3.0 for full admission.

### Degree Requirements:

1. Required credits (21 s.h.)
  - a. Private lessons (12 s.h.)  
MUSA 670-679 Private Lessons (1-3)
  - b. History (3 s.h.)  
MUSC 685 Music Bibliography and Research (3)
  - c. Theory (3 s.h.)  
MUSC 631 Advanced Theory (3)
  - d. Ensembles (suitable for the major performance area) (2 s.h.) Selected with approval from:  
MUSC 603 Opera Orchestra (1)  
MUSC 609 Opera Workshop (1)  
MUSC 613 Clarinet Choir (1)  
MUSC 615 Marching Band (1)  
MUSC 617 Men's Glee Club (1)  
MUSC 637 Wind Ensemble (1)  
MUSC 639 Guitar Ensemble (1)  
MUSC 641 Brass Ensemble (1)  
MUSC 643 Musical Theatre Orchestra (1)  
MUSC 645 Percussion Ensemble (1)  
MUSC 647 Saxophone Ensemble (1)  
MUSC 649 String Ensemble (1)  
MUSC 651 Voice Ensemble (1)  
MUSC 653 Woodwind Ensemble (1)  
MUSC 655 Choral Society (1)  
MUSC 657 Jazz Ensemble (1)  
MUSC 659 Early Music Ensemble (1)  
MUSC 661 Chamber Singers (1)  
MUSC 663 University Chorale (1)  
MUSC 665 Women's Chorus (1)  
MUSC 667 Orchestra (1)  
MUSC 669 Symphonic Band (1)
  - e. Recital (1 s.h.)  
MUSC 797 Graduate Recital (1)
2. Elective courses (10 s.h.)  
Selected with approval from any 500-800 level music courses. A maximum of four of the elective credits may be taken in lessons and/or ensembles.
3. Satisfactory completion of the comprehensive examination.

## OCCUPATIONAL THERAPY

Degree: Master of Science

Program Director: Regena G. Stevens-  
Ratchford  
410-830-2381

The program is designed to prepare graduates to assume key roles in clinical practice, research, education, or administration. Occupational therapists' responsibilities in these roles are to assure high quality services for client groups and to advance the practice of occupational therapy.

Incoming students must select one of two tracks, depending on whether they are already certified occupational therapists. In Track I: Master's Degree Program for Certified Occupational Therapists, students may specialize in Pediatrics, Gerontology, or Administration/Supervision. In Track II: Master's Degree Program for Non-Occupational Therapists, students may specialize in either Pediatrics or Gerontology.

### Track I: Master's Degree Program for Certified Occupational Therapists

#### Admission Requirements:

1. Possess a bachelor's degree with a minimum 3.0 GPA for full admission or a minimum 2.75 GPA for conditional admission.
2. Complete an accredited entry-level professional training program in occupational therapy.
3. Successfully complete the Certification Examination for Occupational Therapists.
4. Submit 3 (three) Departmental Applicant Reference Forms.
5. Submit three (3) copies of the Graduate Occupational Therapy admission essay.
6. Discuss academic/professional plan for Master's Graduate Program with Graduate Program Director

#### Screening for Certified Occupational Therapists

Certified Occupational therapist applicants are screened after the Graduate School receives all application materials on an applicant by applicant basis. These applicants are admitted to

the Occupational Therapy Graduate Program throughout the academic year. Applicants must follow the procedures outlined below.

1. Contact the Graduate Program Director to discuss educational plans and the application process.
2. Submit all application materials to the Graduate School.
3. Meet satisfactory standards for GPA.
4. Meet satisfactory standards for scores on the three reference forms.
5. Meet satisfactory standards for scores on the admission essay.

#### Degree Requirements:

The Master's Degree Program for Certified Occupational Therapists consists of a total of 36 hours of required and elective courses, with or without a thesis.

#### Specialization in Graduate Course Work

Students may specialize by completing six semester hours in pediatrics, gerontology, or administration/supervision.

#### Specialization Courses

##### Pediatrics

- OCTH 623 Assessment in Pediatric Occupational Therapy (3)
- OCTH 633 Occupational Therapy Treatment In Pediatrics (3)

##### Gerontology

- OCTH 621 Geriatric Rehabilitation (3)
- OCTH 631 Community Gerontology (3)

##### Administration/Supervision

- OCTH 605 Managing Human Resources in Occupational Therapy
- OCTH 606 Managing Occupational Therapy Services (3)

#### Graduate Courses

- OCTH 603 Issues in Occupational Therapy (3)
- OCTH 604 Academic & Clinical Education (3)

OCTH 605 Managing Human Resources in Occupational Therapy (3)

OCTH 606 Managing Occupational Therapy Services (3)

OCTH 611 Advanced Occupational Therapy Theory & Philosophy (3)

PSYC 687 Adv. Experi. Design I (3)

OCTH 613 Research Methods in Occupational Therapy (3)

OCTH 621 Geriatric Rehabilitation (3)

OCTH 623 Assessment in Pediatric Occupational Therapy (3)

OCTH 631 Community Programming in Occupational Therapy (3)

OCTH 633 Treatment in Pediatrics (3)

OCTH 781 Graduate Seminar in Occupational Therapy (3)

OCTH 897 Graduate Project (3)

OCTH 898 Graduate Thesis (6)

#### Electives Courses ( 3-6 semester hours)

Students who complete the Project option will have six credits of electives; those students who complete the Thesis option will have three credits of elective.

## Track II: Master's Degree Program for Non-Occupational Therapists

### Program Accreditation

The Graduate Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA) located at 4729 Montgomery Lane, P. O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapist administered by the National Board for Certification of Occupational Therapy. After successful completion of this examination, the individual will be an Occupational Therapist, Registered (OTR). Most states require a license to practice; however, most licenses are based on the results of the NBCOT certification examination.

### Admission Requirements:

1. Possess a bachelor's degree with a minimum

3.0 GPA for full admission or a minimum 2.75 GPA for conditional admission.

2. Complete the following eight admission prerequisite courses with a minimum grade of "C".

English Composition

Introductory Sociology

Introductory Psychology

Abnormal Psychology

Basic Statistics

Human Anatomy and Physiology I with lab

Human Anatomy and Physiology II with lab

Physics (including mechanics and a lab)

3. Submit three Departmental Reference Forms.

4. Submit a graduate admission essay.

5. Complete and verify at least 30 hours of human service activity. (The Department's form must be used.) This work or volunteer experience must have involved direct contact with people with disabilities, and/or illness, and/or other disadvantages. Examples include work/volunteer experience in hospitals; nursing homes; rehabilitation facilities; senior centers; drug rehabilitation programs; programs for the homeless; camps; and/or attendant care for a child, an adolescent, or an adult. The following experiences do not satisfy this requirement: OCTH 101 clinicals, babysitting with children who do not have disabilities, and administrative clerical work. All 30 hours of human service activity must have been completed within two years of the screening deadline. The 30 hours must have been completed in no more than three different settings, and the applicant must have been in each setting for at least 10 hours.

For more information regarding admission prerequisite courses and other aspects of the application process, contact:

Cecily Haeger, College of Health Professions (CHP) Admissions Coordinator

College of Health Professions

Towson State University, Burdick Hall 121

Towson, MD 21204-7097

(410) 830-4170

## Degree Requirements:

The Master's Degree Program for non-occupational therapists consists of 59 hours of Master's Degree Prerequisite courses and 39 hours of required and elective graduate courses with or without thesis (a total of 98 credit hours of course work).

The masters degree prerequisites (59 semester hours) can be completed in eighteen months of full-time study. Applicants are encouraged to attend the program on a full-time basis.

These students spend six months in full-time internships (Level II Fieldwork\*) where they apply the theoretical knowledge and skills appropriate to an entry-level qualified professional occupational therapist. Most sites for these three-month internships are in the Mid-Atlantic area, but arrangements also can be made in other locations if openings are available.

**\*All Level II Fieldwork is completed within 24 months of completion of academic course preparation.**

## Academic Standards for Master's Degree Prerequisite Courses

Students must receive a minimum grade of "C" in each Master's Degree Prerequisite course and maintain a minimum GPA of 2.75 in these courses in order to enroll in OCTH 435.

Non-occupational therapist students must complete all Master's Degree Prerequisite coursework.

A minimum GPA of 2.75 and a grade of "S" is required for entry into graduate-level coursework.

## Specialization in Graduate Course Work

Students may specialize by taking 6 semester hours of course work in pediatrics or gerontology.

### Specialization Courses

#### Pediatrics

- OCTH 623 Assessment in Pediatric Occupational Therapy (3)
- OCTH 633 Occupational Therapy Treatment I n Pediatrics (3)

#### Gerontology

- OCTH 621 Geriatric Rehabilitation (3)
- OCTH 631 Community Gerontology (3)

### Master's Degree Prerequisite Courses

- BIOL 427 Neuromuscular Mechanisms of the Upper Body (2)
- HLTH 207 Health Care in the United States (3)
- OCTH 211 Philosophy of Occupational Therapy (3)
- OCTH 213 Small Group Dynamics (3)
- OCTH 216 Life Span Adaptations (4)
- OCTH 217 Task Analysis I (4)
- OCTH 218 Task Analysis II (3)
- OCTH 221 Clinical Kinesiology (3)
- OCTH 313 Physical Dysfunction: Neurological Conditions (3)
- OCTH 314 Psychosocial Dysfunction (4)
- OCTH 315 Pathological Conditions (3)
- OCTH 317 Physical Dysfunction: Muscular Conditions (2)
- OCTH 319 Physical Dysfunction Clinical (2)
- OCTH 320 Psychosocial Dysfunction (2)
- OCTH 323 Gerontological Occupational Therapy (2)
- OCTH 325 Pediatric Occupational Therapy (4)
- OCTH 326 Pediatric Clinical (2)
- OCTH 428 Occupational Therapy Organizations (3)
- OCTH 429 Seminar: Occupational Therapy Administration (1)
- OCTH 435 Occupational Therapy Internship I (6)

### Graduate Courses

- OCTH 536 OT Internship II (6)
- OCTH 603 Issues in Occupational Therapy (3)
- OCTH 604 Academic & Clinical Education (3)
- OCTH 605 Managing Human Resources in Occupational Therapy (3)
- OCTH 606 Managing Occupational Therapy Services (3)
- OCTH 611 Advanced Occupational Therapy Theory & Philosophy (3)
- OCTH 613 Research Methods in Occupational Therapy (3)
- OCTH 621 Geriatric Rehabilitation (3)
- OCTH 623 Assessment in Peds OT (3)

PROFESSIONAL WRITING

Degree: Master of Science  
Program Director: Harvey Lillywhite  
410-830-2872

The program provides advanced study in the theory of writing, in writing techniques and style, in principles/techniques of editing, and in the functions of written communication within the professional/occupational setting. The program centers on (1) developing the communication skills of people seeking to enter or to advance in occupations requiring extensive written analysis and reporting of data and on (2) improving written communication and its management in professional organizations.

The program features two concentrations. Writing for the Public and Private Sectors provides experience in writing for a wide range of occupations. Writing in the Professions concentrates on an area of specialization: mass media, health professions, science, creative writing, or teaching writing.

Admission Requirements:

1. A 3.0 is required for full admission; 2.5 for conditional admission.
  2. Two letters of recommendation, preferably letters that speak to writing experience and capability.
  3. Writing sample on a designated topic. Information on the writing sample and topic should be obtained from the Graduate School Office or the program director.
  4. Based upon the applicant's undergraduate transcript and upon the writing sample, the department reserves the right to require two specified preparatory undergraduate writing courses, passed with the grade of "B" or higher in each course, for admission.
  5. Application and all admission credentials must be submitted by March 1 for fall semester and by October 1 for spring semester.
- NOTE: Upon admission to the program, the student must meet with the assigned advisor to plan a program of study.

Degree Requirements:

1. Required Core (18 s.h.)
  - WRIT 611 Rhetoric: The Pursuit of Eloquence (3)
  - WRIT 613 Theory of Exposition (3)  
This course must be taken within the first twelve hours of degree work.
  - WRIT 615 History and Development of Prose Style (3)
  - WRIT 617 Editing (3)  
This course must be taken within the first twelve hours of degree work.
  - WRIT 672 Rhetorical Grammar  
This course must be taken within the first twelve hours of degree work.
  - WRIT 691 Research Techniques in Professional Writing (3)
2. Elective Core (18 s.h.)

In addition to the required core each student completes an eighteen-hour elective program from Writing for the Public and Private Sectors or Writing in the Professions. Each concentration has a thesis and non-thesis option.

**Writing for the Public and Private Sectors**

Thesis option:

  - WRIT 898 Thesis (6)  
and twelve hours of electives from the following courses:
  - WRIT 619 Communication in the Profit/Non-Profit Sectors (3)
  - WRIT 621 Business Writing (3)
  - WRIT 623 Technical and Scientific Writing (3)
  - WRIT 625 Design, Layout, and Production of Printed Matter (3)
  - WRIT 627 Modern Rhetoric (3)
  - WRIT 641 Theory of Creativity (3)
  - WRIT 660 Semiotics for Writers (3)
  - WRIT 670 Topics in Writing (3)
  - WRIT 705 Writing Creative Non-Fiction (3)
  - WRIT 709 The Grant Proposal (3)
  - WRIT 711 Managing the Professional Journal (3)
  - WRIT 713 Freelance Writing (3)

- WRIT 729 Corporate Communications Consulting (3)  
 WRIT 730 Writing Reviews (3)  
 WRIT 731 Science and Its Public Audience  
 WRIT 733 Communication Management (3)  
 WRIT 795 Independent Study in Writing (3)  
 WRIT 797 Internship in Professional Writing (3)

**Non-thesis option:**

Eighteen hours of electives are selected from the courses listed above.

**Writing in the Professions**

**Thesis option:**

- WRIT 898 Thesis (6) and twelve semester hours selected from courses in the specialization.

**Non-thesis option:**

Eighteen semester hours of courses in the specialization.

**Specializations:**

**Writing for the Health Professions (18 s.h.)**

Nine to eighteen semester hours are selected from the courses listed below. If fewer than eighteen hours are selected from these courses, the remaining hours are chosen from the list of general elective courses at the end of this section.

- HLTH 617 Public Health Administration (3)  
 HLTH 633 Health Care Systems (3)  
 HLTH 651 Planning and Marketing Health in Business and Industry (3)  
 ISTC 553 Introduction to Instructional Photography (3)  
 ISTC 633 Instructional Television (3)  
 ISTC 655 Media Design and Production (3)  
 ISTC 667 Instructional Development (3)

**Teaching Writing (18 s.h.)**

Nine to eighteen semester hours are selected from the courses listed below. If fewer than eighteen hours are selected from these courses, the remaining hours are chosen from the list

of general elective courses at the end of this section.

Required (Consult with Teaching Writing Advisor)

- SCED 603 Teaching Writing Across the Curriculum (3)

*Or*

- SCED 605 Theory Research and Practice in Teaching Writing (6) (by invitation only)

*Or*

- SCED 558 Using Writing as a Learning Tool in the Secondary School (3)

**Electives:**

- EDUC 661 Responding to and Evaluating Writing (3)  
 EDUC 667 Writing as Thinking (3)  
 EDUC 665 Practicum in Writing Instruction (3)  
 EDUC 785 Research in the Teaching of Writing (3)  
 EDUC 761 Introduction to Research in Education (3)  
 WRIT 633 Teaching College Composition (3)

**Writing for the Mass Media (18 s.h.)**

Nine to eighteen semester hours are selected from the courses listed below. If fewer than eighteen hours are selected from these courses, the remaining hours are chosen from the list of general elective courses at the end of this section.

- MCOM601 Media Writing (3)  
 MCOM603 Criticism in Mass Media (3)  
 MCOM670/  
 679 Special Topics in Mass Communication (3)  
 Scripting for the Visual Media  
 Freelance Feature Writing  
 Advertising Copywriting  
 Corporate Communication Consulting  
 Investigative Reporting  
 MCOM685 Seminar in Media Production: Publicity & Public Relations (3)  
 MCOM687 Seminar in Media Production: Newspapers (3)  
 MCOM690 Directed Readings in Mass Communication (3)  
 MCOM781 Internship in Journalism (3)

- MCOM783 Internship in Public Relations (3)
- MCOM785 Internship in Film (3)
- MCOM787 Internship in Television (3)
- MCOM789 Internship in Radio (3)
- MCOM795 Independent Study in Mass Communication (3)

### Scientific Writing (18 s.h.)

Nine hours of writing courses:

- WRIT 623 Technical and Scientific Writing (3)

*And six hours from*

- WRIT 660 Semiotics for Writers (3)
- WRIT 670 Topics in Writing (3) when applicable
- WRIT 711 Managing the Professional Journal (3)
- WRIT 729 Corporate Communications Consulting (3)
- WRIT 731 Science and its Public Audience (3)
- WRIT 795 Independent Study in Writing (3)
- WRIT 797 Internship in Technical and Scientific Writing (3)

Nine hours of courses from the following departments:

Biology, Chemistry, Computer Science, Mathematics, Physics, or Psychology

The scientific writing specialization does not offer a thesis option.

### Creative Writing (18 s.h.)

Nine to eighteen semester hours are selected from the courses listed below. If fewer than eighteen hours are selected from these courses, the remaining hours are chosen from the list of elective courses at the end of this section.

- WRIT 641 Theory of Creativity (3)
- WRIT 647 Writing Poetry (3)
- WRIT 649 Playwriting (3)
- WRIT 651 Writing Short Fiction (3)
- WRIT 653 Writing the Novel (3)
- WRIT 670 Topics in Writing (3) when applicable
- WRIT 705 Writing Creative Non-fictional (3)
- WRIT 795 Independent Study in Writing (3)
- WRIT 898 Thesis (6)

Electives: Up to three of the following courses may be elected by students to supple-

ment their work in any special application except Scientific writing.

- WRIT 619 Communication in the Profit/Non-Profit Sectors (3)
- WRIT 621 Business Writing (3)
- WRIT 623 Technical and Scientific Writing (3)
- WRIT 625 Design, Layout, and Production of Printed Matter (3)
- WRIT 627 Modern Rhetoric (3)
- WRIT 660 Semiotics for Writers (3)
- WRIT 670 Topics in Writing (3)
- WRIT 705 Writing Creative Non-Fiction (3)
- WRIT 709 The Grant Proposal (3)
- WRIT 711 Managing the Professional Journal (3)
- WRIT 713 Freelance Writing (3)
- WRIT 727 Projecting the Corporate Image (3)
- WRIT 729 Corporate Communications Consulting (3)
- WRIT 730 Writing Reviews (3)
- WRIT 731 Science and Its Public Audience (3)
- WRIT 733 Communication Management (3)
- WRIT 795 Independent Study in Writing (3)
- WRIT 797 Internship in Professional Writing (3)

3. Satisfactory completion of a written master's degree examination. The examination must be taken between completion of 12-18 hours or degree work, and may be repeated once. A second failure of the examination results in dismissal from the program.

## PSYCHOLOGY

Degree: Master of Arts

Vice-Chair, Graduate Programs in Psychology: Anthony C. DiCesare, Ph.D.

The program offers the student the opportunity of in-depth specialization in one of four psychological areas. The areas are clinical psychology, counseling psychology, experimental psychology and school psychology. Each is described below in detail with reference to objectives and requirements. All program prerequisite courses are undergraduate.

The psychology department faculty recognizes a special responsibility to the profession of psychology to ensure that all graduates of our program demonstrate attitudes and behavior consistent with the standards of the profession. The faculty of the concentration involved may recommend to the program director disciplinary action for such behavior as dishonesty, unethical conduct, deficient professional/clinical skills, or other behaviors construed by the faculty as counterproductive to the field of psychology. Recommendation for disciplinary action will be made by a faculty committee consisting of the program director and the graduate faculty teaching within that concentration. Before disciplinary action is carried out, the decision for such disciplinary action will be reviewed by the Professional Standards Committee of the psychology department.

## CLINICAL PSYCHOLOGY

Program Director: Barry A. Bass, Ph.D.  
410-830-3072

The area of clinical psychology aims primarily at training M.A.-level psychologists for employment in state and other non-profit organizations. These psychologists will be able to provide services to patients and clients under the direct and continuing supervision of psychologists licensed by the State Board of Examiners of Psychologists and a medical staff. The program also seeks to prepare students for further graduate study in psychology.

### Admission Requirements:

1. Courses in the following areas:
  - a. General Psychology (3)
  - b. Abnormal Psychology (3)
  - c. Personality (3)
  - d. Behavioral Statistics (3)
  - e. Tests and Measurements (3)

NOTE: These courses cannot be used to meet part of the formal elective requirements for the degree as defined in paragraph 2 below:

2. Acceptable performance on the General Test of the Graduate Record Examination. Although not required for admission, applicants are encouraged to take the Psychol-

ogy Subject Test of the Graduate Record Examination.

3. An interview with the program director of the clinical psychology area.
4. Two letters of recommendation
5. A minimum undergraduate GPA of 2.75 is required for conditional admission to the program and 3.0 for full admission.
6. Students are admitted to the Clinical Psychology program for the fall semester only. Those wishing to begin graduate work in the fall must have their completed application and all admission credentials submitted to the Graduate School by February 1. Admission is granted on a competitive, space available basis.

### Degree Requirements:

1. Completion of required prerequisite courses
2. Plan A: Master of Arts with thesis (minimum 42 s.h.)
  - a. Required courses
    - PSYC 620 Psychodiagnostics I: Intelligence (3)
    - PSYC 631 Advanced Abnormal Psychology (3)
    - PSYC 665 Psychotherapy and Behavior Change I (3)
    - PSYC 653 Research Issues in School/Clinical Psychology (3)
    - PSYC 651 Techniques of Intervention (3)
    - PSYC 765 Personality Assessment in Clinical Psychology (3)
    - PSYC 766 Advanced Personality Assessment in Clinical Psychology (3)
    - PSYC 790 Seminar in Ethics and Professional Psychology (3)
    - PSYC 697 Practicum in Clinical Psychology (3)
    - PSYC 797 Internship in Clinical Psychology (3)
    - PSYC 898 Thesis (6)
  - b. Electives
 

Three semester hours of courses are elected by the student from within or outside the field of psychology to complement the program of study. Prior written consent of the area director must be obtained.

*Or*

Plan B: Master of Arts without thesis (minimum 39 s.h.)

- a. Required courses are identical to those in Plan A except for thesis.
- b. Electives  
Six semester hours.
3. All students must obtain the grade of "B" or higher in PSYC 697 Practicum in Clinical Psychology and PSYC 797 Internship in Clinical Psychology. Students earning a grade lower than "B" in either course may repeat that course no more than one time. Failure to earn a "B" or higher in both courses will result in dismissal from the program.

NOTE: The Practicum and internship carry with them a residency requirement of two semesters. The student must be available for placement in a clinical setting.

## COUNSELING

Program Director:

Anthony C. DiCesare, Ph.D.

410-830-3063

The purpose of the counseling area is to develop professionally responsible individuals capable of facilitating a counselee's personal growth and development. He/she is trained to help the client explore educational, vocational and personal goals, and seeks to facilitate the counselee's development of a meaningful course of action in these areas. The training program requires an understanding of psychological principles and reflects professional practices and responsibilities consistent with current research findings. Students must demonstrate proficiency in these two areas, and must successfully complete both an advancement to candidacy examination and a comprehensive examination to show that he/she is thoroughly grounded in those theoretical, research, and other academic competencies upon which successful counseling is based. Because counseling psychology is an applied field, the student must demonstrate the utilization of appropriate skills and techniques in helping actual clients to identify and to solve personal problems.

The objective is to facilitate knowledge of: (1) psychological, sociological, and cultural foundations of human development and behavior;

(2) career development and occupational choice, (3) skills in the use of appraisal and measurement techniques, research methodology and statistics, (4) role and function of the agency in which one plans to work (5) issues pertinent to the profession of counseling such as philosophical foundations, ethical standards, professional practice and interprofessional relationships, and (6) practitioner competence in observing and interpreting human behavior and facilitating behavioral change with individuals and groups.

Students must select a concentration in counseling from: Community Counseling or Rehabilitation Counseling

## Admission Requirements:

1. Courses in the following areas:
  - a. General Psychology (3)
  - b. Statistics (3)
  - c. Introduction to Tests and Measurements (3)
  - d. Abnormal Psychology (3)
2. A minimum undergraduate GPA of 2.75 is required for conditional admission to the program.
3. Two letters of recommendation attesting to the applicant's possession of personal characteristics intrinsic to sound interpersonal skills.
4. Completed application and admission credentials must meet the deadlines of February 1 for fall semester and October 1 for spring semester. Admission is granted on a competitive, space-available basis.

## Degree Requirements:

1. Completion of required prerequisite courses
2. Required Core:
  - PSYC 615 Introduction to Research Methods in Counseling (3)
  - PSYC 605 Counseling Techniques (3)
  - PSYC 607 Applied Theories of Counseling (3)
  - PSYC 721 Group Counseling (3)
  - PSYC 727 Use of Tests in Counseling (3)
  - PSYC 745 Counseling Practicum (6)
3. Concentration Core (select one):
  - Community Counseling
  - PSYC 609 Counseling Psychology - Pre-Practicum (3)

- PSYC 611 Developmental Psychology (3)
- PSYC 613 Community Mental Health Counseling (3)
- PSYC 631 Advanced Abnormal Psychology (3)

Elective (3) or Thesis (6)

Rehabilitation Counseling

- PSYC 606 Introduction to Career Development (3)

- PSYC 661 Foundations of Rehabilitation Counseling (3)

- PSYC 667 Psychosocial Aspects of Disabilities (3)

- PSYC 668 Mental Aspects of Disability (3)

- PSYC 693 Internship in Rehabilitation Counseling (3)

Elective (3) or Thesis (6)

4. Satisfactory completion of a departmental candidacy examination and a written master's degree examination are required. These examinations are evaluated for content and ability to clearly express oneself in writing.
5. Passing the Departmental Advancement to Degree Candidacy Examination in Counseling Psychology and consent of director are prerequisites for the following courses: PSYC 721 and PSYC 745.
6. Students should be prepared to take at least two and one half years to complete the program.
7. All degree candidates must meet with their academic advisor to file intended programs of study. This should be done prior to, or during, the first semester of coursework. The program can be amended in consultation with the advisor.

NOTES: Elective selected by the student must have prior written consent of the advisor and must be approved for the student's program of study.

Students who fulfill practicum requirements in a public school are charged a practicum fee.

## EXPERIMENTAL PSYCHOLOGY

Program Co-Directors:

Michael Figler / Craig Johnson  
410-830-3217/410-830-3218

The experimental psychology area is designed to prepare students for conducting research in industrial, government, private consulting, or hospital settings; or for enrollment in Ph.D. programs. Students receive comprehensive instruction in research design, statistical methods (both univariate and multivariate), computer applications (both for data collection and analysis, e.g., SPSS), professional writing, and specialized areas of psychology. Areas of specialization include human neuropsychology, artificial intelligence, ethology/comparative, industrial, cognitive, social, and physiological psychology. A meaningful individualized program of electives may be pursued by taking courses in a number of different areas including experimental, industrial/organizational, physiological, clinical and computer science.

Students who complete this program will be prepared to pursue other advance degrees in psychology in any specialty area, or compete for such positions as laboratory researcher, experimental designer, or psychometrician.

### Admission Requirements:

1. Courses in the following areas:
  - a. Statistics (3)
  - b. Experimental Psychology (4)
  - c. Learning (3)
2. A minimum undergraduate GPA of 2.5 is required for conditional admission to the program and 3.0 for full admission.
3. Two letters of recommendation
4. Completed application and admission credentials must meet the deadlines of March 1 for fall semester and October 1 for spring semester. Admission is granted on a competitive, space-available basis.

### Degree Requirements (39 s.h.):

1. Core Program (32 s.h.)
  - PSYC 673 Advanced Experimental Psychology I (4) and
  - PSYC 674 Advanced Experimental Psychology II (4)
  - PSYC 675 Proseminar I (3)
  - PSYC 676 Proseminar II (3)
  - PSYC 677 Learning (3)
  - PSYC 679 Special topics Seminar (3)

- PSYC 687 Advanced Experimental Design I (3)
- PSYC 688 Advanced Experimental Design II (3) or
- PSYC 689 Multivariate Methods (3)
- PSYC 898 Thesis (6)

2. Elective courses (7 s.h.)

The student may take any graduate elective at the 500 to 700 level with permission from the program director.

## SCHOOL PSYCHOLOGY

Program Director: Susan M. Bartels  
410-830-3080

School Psychology is the specialty area of psychology which deals with children and their parents in school environments. Two programs, both approved by the Maryland State Department of Education (MSDE), are offered.

The concentration in School Psychology leading to a master's degree consists of 33 or 36 graduate semester hours which includes a 500 hour internship in the schools. Students completing the degree are certification eligible for the title, "Psychometrist," from MSDE.

The primary goal at this level is to ensure that students are competent in all areas of psychodiagnostics with emphasis placed on individual testing of intellectual, personality and sensory/perceptual functioning. During the internship, students are trained to work with regular and special education children in grades K through 12 from a broad variety of social/economic/cultural backgrounds.

### Admission Requirements:

1. Courses in the following areas: (total 18 s.h.)
  - a. Behavioral Statistics (3)
  - b. Abnormal Psychology (3)
  - c. Personality (3)
  - d. Test and Measurements (3)
  - e. Human Growth and Development - 3 semester hours selected from the following:
    - 1) Infancy and Childhood (3)
    - 2) Child Psychology (3)
    - 3) Adolescent Psychology (3)

### 4) Human Development (3)

#### f. Educational Psychology (3)

NOTE: These undergraduate prerequisites cannot be used to satisfy any part of the requirements for the degree. They must be completed prior to initiation of coursework for the degree.

2. A minimum undergraduate GPA of 3.00 is required for admission to the program. Students with GPA's between 2.75 and 2.99 may be admitted with conditions.
3. Two letters of recommendation attesting to the applicants' possession of personal characteristics intrinsic to sound interpersonal skills.
4. Acceptable performance on the general test of the Graduate Record Examination or competency for graduate study as evidenced by an earned masters' degree in psychology or a related field. The GRE requirement may also be waived for international students who can document at least two years of successful employment at the professional level in school psychology, psychology, or a clearly related field.
5. Completed application and admission credentials must meet the deadline of February 1 for fall admission and October 1 for spring admission. Admission may be extended on a space-available basis.

NOTE: The highest ranking applicants will be required to interview with the director of the School Psychology program.

### Degree Requirements:

1. Completion of required prerequisite courses.
2. Plan A: Master of Arts with thesis (minimum 36 s.h.)
  - a. Required courses
    - PSYC 651 Techniques of Intervention (3)
    - PSYC 650 Psychodiagnostics I: Intelligence (3)
    - PSYC 761 Psychodiagnostics II: Personality Evaluation (3)
    - PSYC 763 Psychodiagnostics III: Consultation (3)
    - PSYC 611 Developmental Psychology (3)
    - PSYC 655 Research Issues in School/Clinical Psychology (3)

- PSYC 653 Research Issues in School  
Clinical Psychology (3)  
PSYC 603 Human Learning (3)  
PSYC 771 Practicum in Psychodiagnostic  
Evaluation (3)  
PSYC 794 Internship in School Psychol-  
ogy (3)  
PSYC 898 Thesis (6)

*Or*

Plan B: Master of Arts without thesis  
(minimum 33 s.h.)

- a. Required courses are identical to Plan A except for thesis.
  - b. A three credit elective replaces the thesis.
3. Successful completion of a departmental candidacy oral examination and a written comprehensive examination.

## CERTIFICATE OF ADVANCED STUDY IN SCHOOL PSYCHOLOGY

The Certificate of Advanced Study (CAS) is an integrated program of 30 graduate semester hours including a 700 hour internship. The CAS is open only to holders of an M.A. with a concentration in school psychology. Upon completion of the CAS, student are certification eligible for the title, "School Psychologist," from MSDE.

The three major goals of the CAS program are to further refine students' diagnostic skills including assessment of preschool children, and to train students in a variety of intervention and educational and consultation techniques. During the internship, students further develop their competencies in a supervised school setting. In addition to K through 12, CAS interns must become skilled in testing and evaluating preschool children.

CAS students follow an individualized course of study prepared upon entry to the program. While they do take classroom examinations, there is more emphasis on individualized written projects than in the M.S. program.

### Admission Requirements:

1. Possession of a master's degree with a concentration in school psychology from a regionally accredited college/university
2. Demonstration that the applicant meets all

of the curricular requirements for certification as a Psychometrist in Maryland

3. Three letters of recommendation attesting to the applicant's basic competencies in performing the duties of a school psychologist and to the possession of personal characteristics intrinsic to sound interpersonal skills

### Certificate Requirements:

1. Required courses (30 s.h.)
  - PSYC 657 Learning Disabilities 11:  
Remediation (3)
  - PSYC 703 Preschool Assessment (3)
  - PSYC 733 Assessment and Treatment of  
Exceptional Children(3)
  - PSYC 625 Behavioral Techniques (3)
  - PSYC 731 School Based Consultation (3)
  - PSYC 790 Seminar in Ethics and Profes-  
sional Psychology (3)
  - PSYC 773 Practicum in Intervention  
Techniques (3)
  - PSYC 794 Internship in School Psychol-  
ogy (3)

Recommended Electives (6 s.h.)

- a. PSYC 524 Social Psychology (3)
  - b. PSYC 565 Physiological Psychology (3)
2. Each candidate is required to submit a professional portfolio during the last semester of study. The portfolio must contain samples of: psychological evaluations, intervention treatment plans, in-service training programs and ethical problem solving.

## SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

Degree: Master of Science

Program Director: Julie E. Ries

410-830-3105

The speech-language pathology and audiology program is accredited by the Educational Standards Board (ESB) of the American Speech-Language-Hearing Association and the Maryland State Department of Education. The program provides the student with (1) study of normal communication processes; (2) an in-depth investigation of communication disorder-

ders; (3) development of therapeutic goals, procedures, and materials; and (4) extensive clinical experience in on- and off-campus settings. The program is designed to enable pre-professionals in the field, i.e., those with a bachelor's degree or the equivalent in speech-language pathology and audiology, to meet the academic and clinical practicum requirements of national and state accrediting, certifying, and licensing bodies.

Students elect to specialize in either speech-language pathology or audiology. Applicants indicate their area of emphasis on the application form.

The degree will prepare the individual for national/state certification and state licensure for employment in public school, clinical or hospital settings, or private practice and to pursue advanced degrees. All clinical practicum clock hour requirements of the American Speech-Language-Hearing Association (ASHA) and the Department of Communication Sciences and Disorders must be completed before the M.S. degree is awarded.

The Communication Sciences & Disorders Department faculty recognizes a special responsibility to the profession to ensure that graduates of master's degree programs demonstrate attitudes and behaviors consistent with the standards of the profession. In keeping with this responsibility, faculty members may recommend to the program director that a student should be disciplined (including dismissal) for exhibiting behavior deemed to be inconsistent with the standards of the profession. Non-professional behaviors include dishonesty, unethical conduct, deficient professional/clinical skills, or other behaviors construed by the faculty as counter-productive to the field. Recommendations for disciplinary action will be made by a faculty committee consisting of the program director and the appropriate graduate faculty. The recommendation for disciplinary action will be reviewed and acted upon by the faculty of the department and forwarded to the dean of the College of Graduate and Extended Education. The student has the right to due process.

**Admission Requirements:**

1. Bachelor's degree in speech-language pa-

thology and audiology with a minimum of 33 semester hours or 42 quarter hours and a minimum GPA of 3.00 in the major. A minimum of twenty-five documented hours of clinical observation and one course in clinical practicum is required (students without this course take it as a part of their graduate program, necessitating a 48 semester hour degree program).

*Or*

Student's without a bachelor's degree in Speech-Language Pathology and Audiology must have completed a minimum of 30 semester hours of undergraduate coursework in speech-language pathology and audiology, including the following courses or their equivalents, plus a behavioral statistics course:

- SPPA 105 Speech and Language Development (3)
- SPPA 210 Phonetics of American English (3)
- SPPA 200 Anatomy and Physiology of the Auditory and Vocal Mechanism (3)
- SPPA 302 Speech Pathology I: Phonology (3)
- SPPA 303 Hearing Science (3)
- SPPA 304 Speech Pathology II: Language (3)
- SPPA 313 Language and Speech Science (3)
- SPPA 321 Introduction to Audiology (3)
- SPPA 325 Introduction to Aural Rehabilitation (3)
- SPPA 416 Clinical Observations and Techniques (3)

2. Acceptable evaluation by three persons familiar with the applicant's scholarly and clinical work and aptitude is required on the speech-language pathology and audiology rating form. This form may be obtained by calling or writing to the department or the Graduate School Office. Ratings must be submitted only on these forms, filled out completely and according to the instructions. Rating forms will be accepted only if completed by faculty or employers within the profession.
3. The American Speech-Language-Hearing Association's minimum requirements for application for Certificate of Clinical Com-

petence includes a minimum of 12 semester hours in basic sciences: biology, physical science and math (6 semester hours) and behavioral/social sciences (6 semester hours). Three semester hours in aural rehabilitation and three semester hours in auditory disorders is required in Speech-Language specialization. Three semester hours each in speech and language courses is required for students in the Audiology specialization.

4. A Behavioral Statistics course, or its equivalent, fulfills the math requirement and is highly recommended. Students without these courses will have to take them as part of their graduate program.
5. Students are admitted for the fall semester only. Completed application, and admission credentials must meet the deadline of February 1. Admission is extended on a space-available basis with 75% of spaces allotted for Maryland residents.

### Degree Requirements:

1. Required Core (15 s.h.)
  - SPPA 705 Professional Issues in SPPA (3)
  - SPPA 713 Seminar: Research Design in SPPA (3)
  - SPPA 745 Advanced Clinical Practicum - on campus (3)
  - SPPA 746 Advanced Clinical Practicum - off campus (3)
  - SPPA 747 Advanced Clinical Practicum in Schools (3)
2. Completion of Speech-language pathology track (30 s.h.) or completion of Audiology track (30 s.h.)
  - Speech-language pathology track (30 s.h.)
  - SPPA 602 Foundations of Communication: Developmental Psycholinguistics (3)
  - SPPA 604 Adult Neurogenic Language Disorders (3)
  - SPPA 606 Language Disorders in Children (3)
  - SPPA 610 Phonology, Articulation, and and Motor Speech (3)
  - SPPA 614 Fluency Disorders (3)
  - SPPA 620 Voice Disorders in Children and Adults (3)

- SPPA 622 Diagnostic Process in Speech-Language Pathology (3)
- SPPA 626 Adult Neurologic Speech Disorders (3)
- SPPA 628 Dysphagia (2)
- SPPA 706 Family Centered Early Intervention (2)
- SPPA 714 Alternative/Augmentative Techniques in Communication Systems (2)

### Audiology track (30 s.h.)

- SPPA 603 Neuroanatomy and Physiology of Auditory and Vestibular Systems (3)
- SPPA 621 Diagnosis of Disorders of Auditory System (3)
- SPPA 645 Aural Habilitation/Rehabilitation (3)
- SPPA 653 Pediatric Audiology (3)
- SPPA 655 Hearing and Selection (3)
- SPPA 731 Laboratory: Psychoacoustics, Instrumentation, Calibration (3)
- SPPA 743 Seminar in Neurologic Aspects; of the Auditory System (3)
- SPPA 751 Seminar in Industrial and Environmental Audiology (3)
- SPPA 755 Laboratory: Electroacoustic Considerations and Modifications of Hearing Aids (3)

### Elective (3)

3. Successful completion of a Grand Rounds Presentation. This requirement is in effect for all students admitted for the fall semester 1997 and later. Students should obtain information regarding the Grand Rounds Presentation from the program director. (Students admitted for semesters prior to fall, 1997 must complete a written comprehensive examination unless they elect, in writing to the program director, to complete the Grand Rounds Presentation requirement instead of the written examination. Once the written examination or the Grand Rounds Presentation has been initiated no further option may be elected.)
4. Students must demonstrate acceptable writing skills in all clinical and academic work. Students showing weakness in this area may be advised to take a remedial writing experience in addition to their degree work.

**TEACHING (M.A.T.)**

Degree: Master of Arts in Teaching

Program Director: Gary Kilarr

410-830-2345

The Master of Arts in Teaching (M.A.T.) is an option for those without formal training in the field of education who wish to enter the teaching profession. It is well suited to recent graduates in the liberal arts and to adults seeking to change careers. A graduate of this program will meet state certification teaching requirements at the early childhood, elementary, or secondary level. The program may be completed as full-time or part-time. The full-time program requires a full-time commitment to courses and field placement. The program will encompass a summer session, fall semester, and an extended spring semester.

The part-time program requires an appropriate commitment, but is extended over six semesters (including two summers). Part-time students must also be able to participate in a minimum of thirty hours in field experience per five semesters and become full-time for their last semester (extended spring semester).

**Admission Requirements:**

1. A baccalaureate degree with an appropriate undergraduate major in the liberal arts or arts and sciences. Secondary Certification requires a minimum of 36 credits in a content major, i.e., Math, Science. Early Childhood and Elementary Education Certification should have a well-rounded liberal arts background including courses in science, mathematics, English, and other humanities.
2. A minimum of either a 3.0 cumulative GPA, or a 3.0 GPA in your last sixty credits. A GPA between 2.99 and 2.50 will qualify the applicant for conditional admission.
3. An interview with the program director.
4. A brief admission essay in which the applicant discusses reasons for entering the teaching profession.
5. Two letters of reference.
6. Applicants and all admission credentials for admission must be submitted to the Graduate School by October 1 for full-time and

March 31 for part-time. Late applications will only be considered if space is available.

**Degree Requirements:**

1. Completion of the following (39-41 s.h.) courses.  
 EDUC 730 Learning Principles for Teachers (3)  
 EDUC 731 Understanding the Curriculum K-12(3)  
 EDUC 732 Research Methodology in the Information Age (2)  
 EDUC 733 Teaching Models and Processes (3)  
 \*EDUC 734 Teacher as Researcher I (Total of 4 semester hours in the program)

**Early Childhood and Elementary:**

- MATH 321 or 323 Teaching Mathematics in Early Childhood or Elementary School (3)  
 REED 601 Reading Theory and Practice (3)

**Secondary:**

- Methods in curriculum area (3)  
 SCED 560 Using Reading and Writing in Secondary School (3)  
 EDUC 735 Proseminar: Problems and Issues (3)  
 EDUC 737 Teaching Students with Disabilities in the Mainstream (2)  
 EDUC 797 Internship - Classroom observations at appropriate school sites (1)  
 EDUC 736 Classroom Management (2) with EDUC 797 (1)  
 \*\*EDUC 798 Graduate Practicum - Student Teaching (10)
- \* To graduate, the student must earn the grade of "B" or higher in EDUC 734, Teacher as a Researcher, each of the two semesters it is taken. The Teacher/Researcher Paper, an extensive year-long study undertaken in this course is required to demonstrate program mastery.
- \*\* Admission to the Practicum based on successful completion of N.T.E. and speech and hearing screening.

## THEATRE

Degree: Master of Fine Arts

Program Directors: Juanita Rockwell, Ralph Blasting  
(410)830-3851

The M.F.A. program in Theatre at Towson University is an experimental, self-directed process designed to challenge, expand and develop the participant's artistic vision. This vision is explored in terms of its structural, aesthetic and cultural context, as well as its skillful application of craft. Intercultural, interdisciplinary and collaborative, our program aims to reconstruct a theatre capable of transforming the artistic, social and economic constraints of the American artistic landscape.

We seek individuals who wish to encompass the widest possible understanding of theatre as an art form: those who would feel restricted by a conservatory style program. Whether directing, designing, performing, producing, constructing, or writing, the student-artist must be willing to work both independently and collaboratively. The program is based upon the cross-fertilization of ideas among participants and the thoughtful implementation of human, material, economic, and environmental resources. To facilitate this process, student-artists will be expected to participate in creating their own opportunities, work in a variety of theatrical disciplines, and act as artist-producers for their projects.

Seminars and workshops with distinguished visiting artists form the foundation of the curriculum. These seminars expose the student-artist to a wide range of theatrical styles and methods, emphasizing their cultural context and underlying principles. In a culture dominated by television and the film industry, our training specializes in non-naturalistic theatre forms in order to challenge and strengthen the student-artist's personal aesthetic.

All graduate students approach projects from an interdisciplinary perspective. New work may be created in a variety of forms, such as interdisciplinary constructions or installations, ensemble creation, performance art, movement-theatre, or productions of new scripts. Transformations of existing literature may involve reconstructing classic text or de-

sign elements, historical reinterpretation, or the integration of intercultural aesthetics. In directing and design, special attention is given to the collaborative creation of style. In playwriting, special attention is given to innovative language and structure. In dramaturgy, special attention is given to aesthetic and cultural context. In technical production, special attention is given to integrating safely new technology, practices and materials. In performance, special attention is given to the integration of voice and movement as an expression of style. The student-artist is urged to combine disciplines within a given project, perhaps working as designer/director, technician/designer, or writer/performer.

The program is committed to training the artist as producer. Each student must be prepared to take responsibility for the overall task of bringing the work into being. To that end, we seek to build a nurturing environment where the combined energies of faculty, visiting artists and fellow students assist in the creation of work. In support of the idea that the developing independent artist will be identifying and serving audiences in the community, graduate students are encouraged to seek off-campus performance spaces.

The M.F.A. program seeks talented and innovative theatre artists who are committed to questioning old assumptions, exploring new possibilities, refining existing talents and articulating a vision to an audience. Student-artists must be committed, disciplined and capable of thriving in a self-directed environment. In a rapidly changing world culture, the artist must develop new ways of seeing, new skills, and new ways of working. The M.F.A. in Theatre at Towson offers a laboratory in which to explore new responses to a new world.

### Admission Requirements:

Applicants must hold a bachelor's degree from a regionally accredited college or university with a grade point average of 3.0 or higher based on the applicant's overall undergraduate work or on the last 60 hours. Candidates with a minimum GPA of 2.5 may be eligible for admission at the discretion of the M.F.A. Program Directors and the Graduate School.

All matriculated students are accepted conditionally for one year. At the end of the first year of study, there will be a review process in which a student is either fully accepted, accepted conditionally for another year, or denied continuance.

Candidates are screened by both the M.F.A. Program and by the Graduate School.

The following should be submitted directly to the Graduate School no later than March 1:

- 1) A Graduate School application with required fee.
- 2) A current professional resume.
- 3) Three letters of recommendation from individuals who can speak to the applicant's talent, scholarship, collaborative skills, and ability to thrive in a self-directed program.
- 4) A list of at least three other references, with telephone numbers, which the department may contact for additional evaluations.
- 5) Official transcripts from every college or university attended.

The following are required as part of the department screening process and should be sent to the M.F.A. Program Directors directly, no later than March 1:

- 1) A Personal Artistic Statement outlining the candidate's goals as a theatre artist and the relevance of the M.F.A. program at Towson to the candidates objectives.
- 2) A current professional resume.
- 3) Slides, photographs, video, reviews, papers or other supporting materials.

An interview with an audition and/or preliminary portfolio review will be granted at the discretion of M.F.A. Faculty following initial admission screening. A list of suggested materials can be obtained from the program directors.

For Graduate School application materials, write or call: The Graduate School, Towson University, Towson, MD 21252 410-830-2501,

or Fax: 410-830-3434.

For additional program information, write or call: Juanita Rockwell, M.F.A. Program Artistic Director, Theatre Department, Towson University, Towson, MD 21252 410-830-3851, Fax: 410-830-3914, E-Mail: Rockwell-J@toe.towson.edu

## Degree Requirements (60 s.h.)

### 1. Required courses (43 s.h.)

- THEA 601 Dramaturgy: Interdisciplinary (3)
- THEA 602 Dramaturgy: Intercultural (3)
- THEA 607 Self-Empowerment in Theatre (3)
- THEA 675 Research Methods (3)
- THEA 5XX/  
6XX Theatre Systems (3)
- THEA 5XX/  
6XX Theatre Design Techniques (3)
- THEA 6XX Text Construction (3)
- THEA 720 Graduate Directing (3)
- THEA 740 Graduate Project Laboratory (3)
- THEA 750 Graduate Project Rehearsal and Performance (2)
- THEA 760 Integrated Seminar (3 - must be repeated at least once)
- THEA 897 Final Project (6)

And one of the following:

- THEA 603 Graduate Performance: Solo (3)
- THEA 605 Graduate Performance: Ensemble (3)
- THEA 606 Voice/Movement Integration (3)

### 2. Electives courses (17 s.h.)

These courses are chosen in collaboration with a department advisor.

### 3. Portfolio review before registering for the final project

Towson University reserves the right to change degree requirements for the M.F.A.. Information on changes will be available from the graduate program directors.

# STUDENT SERVICES

## Housing

Graduate students may live in residence halls or dorm-style apartments if space is available. Another popular and convenient residence for both single and married graduate students is The Burkshire at Towson University. These University-owned apartments range in size from one-bedroom to two-bedrooms with a den. They are located adjacent to campus and are leased for 12 months. The Burkshire offers amenities such as washer/dryers and dishwashers. The Residence Department, 410-830-2516, can provide more information about on-campus housing. The Burkshire can be reached at 410-324-8100.

An "Off-Campus Housing" bulletin board in the University Union is available for use by students seeking housing, landlords who have housing to offer, or renters looking for roommates. Apartment guides and a list of rooms for rent in private homes can be obtained from the Office of Student Development, University Union, Room 232. Another resource is the Baltimore Sun Apartment Search office, a local business providing free locator search information to renters on over 1,300 apartments in Towson and 90,000 apartments in the Baltimore area. You can reach Baltimore Sun Apartment Search at 800-874-0788 or locally at 410-292-1980.

## Parking

If you are visiting the campus, you will find meters at the University Union garage and the Administration Building that give you 15 free minutes to obtain a guest permit. There is open parking throughout campus on weekends, starting at 3:00 p.m. on Fridays.

Student parking permits are available for purchase from the Parking Services office in the University Union. The cost is \$50 per semester, \$80 per year, or \$20 for the summer session. A student parking permit gives you access to all student lots, and faculty/staff lots when the gates are up. For a complete list of lots and when they are open to students, contact the Parking Services office, 410-830-2284.

A free campus shuttle bus runs from 7:15 a.m. to 10:15 p.m., Monday through Friday, during the fall and spring semesters, with stops throughout campus. Students wishing an escort on campus during evening hours are encouraged to call the escort van from campus phones located in every campus building. This year-round service is provided by the University Police Department from 5:00 p.m. to 2:00 a.m. Monday through Friday, and Saturday and Sunday from 11:00 a.m. to 1:00 a.m.

## Albert S. Cook Library

*410-830-2456 Circulation*

*410-830-2461 Information Desk*

*410-830-2462 Reference Desk*

The Albert S. Cook Library has over 540,000 volumes and receives more than 2,300 periodicals by subscription. In addition to books and periodicals, the library collections also include CDs, cassette tapes, videotapes, films, videodiscs, pictures, pamphlets, U.S. and Maryland government documents, and teaching aids. All of these materials, with the exception of pictures and pamphlets, are listed on VICTOR, the online catalog. VICTOR also lists materials in other libraries of the University of Maryland System and databases of scholarly and general interest journal abstracts; National Newspaper Abstracts; broadcast abstracts for CNN, ABC, CBS, PBS, and National Public Radio (Journal Graphics); and Resources in Education (RIE) and Index to Current Journals in Education (CIJE) holdings. Several databases are also available on freestanding computers or the library LAN. These include: American: History and Life, Census, the Cumulative Index to Nursing and Allied Health Literature, Compact D/SEC (Disclosure), Ethnic Newswatch, ERIC, Historical Abstracts, the Modern Language Association International Bibliography, the National Trade Data Bank, PsycLIT, and the Sun.

The library also offers an interlibrary loan service for books and journals not held by Cook

Library. A small cost may be involved if the book or journal is not available from a Maryland cooperating library. A document delivery service is also available for copies of journal articles indexed in the Expanded Academic Index not owned by the library.

Cook Library also houses the Curriculum Resource Center (CRC), which provides support to pre-service and in-service educators. The center contains reference and curriculum materials; periodicals and newsletters; educational software, CD-ROM, videodiscs, videocassettes, and CRC Homepage to the Internet; and deposit collections. A university ID card is required to use many of the library's services and allows the student to borrow at libraries at Morgan State University, St. Mary's College, and schools in the University of Maryland System. Orientation sessions are offered during the first few weeks of each semester.

## Computing And Network Services

*Albert S. Cook Library, First Floor,  
410-830-2041*

Towson's Computing and Network Services (CANS) is located on the first floor of Cook Library. Graduate students may establish accounts which provide access to Pine Mailer, an easy-to-use e-mail program; Tin Usenet News, a community of electronic bulletin boards; Gopher Client, a hierarchical structure of menus for exploring information on the Internet; the World Wide Web; and VICTOR, a statewide online library catalog.

## Recreation And Fitness Facilities

*Towson Center, 410-830-2370*

*(Reservation Desk)*

*Burdick Hall, 410-830-3649*

Recreation and fitness facilities are located at the Towson Center and in Burdick Hall. The Towson Center includes a full range of fitness equipment; courts for tennis, squash, handball, and racquetball; and indoor and outdoor jogging tracks. Students can check out necessary equipment by presenting a TU ID card at the reservation desk outside the racquetball courts.

Burdick Hall has an Olympic-size swimming pool, a fitness room, and gyms. Tennis courts and intramural playing fields are close to the facility. Towson's Recreational Sports program offers structured intramurals, unstructured recreational activities, and sports clubs for all students, faculty, and staff. The intramural program has more than 20 different sports (team and individual), including softball, flag football, volleyball, indoor soccer, and bowling. Aerobic fitness sessions are offered during the fall and spring semesters.

There are 21 intercollegiate sports teams, including baseball, basketball, football, lacrosse, gymnastics, soccer, swimming, and track. Students who want to watch the games can obtain free tickets with their TU ID card. Home games are played at the Towson Center/Minnegan Stadium Complex.

## The University Union

The University Union is the social hub of the University. Many activities and events take place there during the day and evening. Services and programs housed in the Union include the University Store; a Ticketmaster outlet; a recreation center; Auxiliary Services; the Student Activities Office; a U.S. Post Office; two ATMs; several dining facilities; a coffee and dessert bar; and a lounge.

## Student Identification Card

The University issues a photo ID card to students, faculty, and staff. The card is free and does not have to be renewed. Students should keep the card with them since it is necessary for using services at Cook Library, Computing and Network Services, athletic facilities and for obtaining student rates for some sports and entertainment events.

## The Student Day Care Center

*Lida Lee Tall, 410-830-2652*

The Student Day Care Center at Lida Lee Tall provides day care for children, ages 2 through 5, of University students. The center is open from 7:30 a.m. to 5:30 p.m., only when school is in session. If interested, students should contact the center to add their child's name to the waiting list.

## Counseling Center

*Glen Esk, 410-830-2512*

*Office Hours: Monday – Thursday,*

*8:00 a.m. – 7:00 p.m.;*

*Friday 8:00 a.m. – 4:30 p.m.*

The Counseling Service provides a variety of professional services for students, including individual and group counseling, psychiatric services, consultation, outreach workshops and career development programs. All Counseling Center services are free and confidential. The Counseling Center also houses the University Testing Service. Information and registration booklets for the GRE, NTE, LSAT, GMAT, and other tests are available upon request.

## Dowell Student Health Center

*Dowell Hall, Appointments 410-830-2466*

*General Information 410-830-2467*

*Office Hours: Monday – Friday,*

*8:30 a.m. – 4:30 p.m.*

The Dowell Health Center offers high-quality, cost-effective primary health care to all registered students. Services include outpatient care for illness and injuries; prescription birth control; pre-employment physicals and annual gynecological exams; anonymous HIV testing; diagnosis and treatment of sexually transmitted diseases; health education counseling; and programs on smoking cessation, nutrition, weight control, and reproductive health. Health insurance is strongly recommended to help cover the cost of services not provided at the Health Center. The University sponsors an excellent comprehensive insurance policy at a very reasonable cost which provides 12-month coverage whether at school or elsewhere. Informational packets are available at the Dowell Student Health Center.

## The Career Center

*7800 York Road, Third Floor, 410-830-2233*

*Office Hours: Monday – Friday,*

*8:30 a.m. – 4:30 p.m.*

The Career Center assists students in developing, evaluating, and implementing their career plans. Services include full- and part-time job listings, career and employer information, on-campus job interviews, job fairs, informa-

tional career programs, and seminars. Students can also purchase a resume software program that matches their resume with electronic job listings, provides eligibility for on-campus interviews, and establishes a credential file for letters of recommendation and evaluations. The office also coordinates internships for graduate students in the Human Resource Development and Liberal Studies degree programs and may have information on special projects or research opportunities that are available. Graduate students in other programs should check with their faculty advisers about obtaining internships. The Service-Learning Program allows students to provide direct services that meet community needs and address societal issues. Students may earn academic credit for participating in this program. Graduate students are welcome to visit the center and pick up a handbook and schedule of events.

## Office Of Student Development

*University Union, Room 232, 410-830-3307*

*Office Hours: Monday – Friday*

*8:30 a.m. – 5:00 p.m.*

The Office of Student Development provides information on services to commuter students, such as off-campus housing, transportation, and parking. The office also sponsors two Student Government Association organizations for non-traditional age students. The first, for students 23 years of age and over, plans events geared to adult students. "The Majors," for students 50 years of age and over, involves students in social, cultural, and service-oriented activities.

## Graduate Student Association

*410-830-3967*

The Graduate Student Association (GSA) upholds the mission of academic excellence at Towson University and provides a vehicle for graduate students to express their needs, concerns, and ideas. The GSA gives campus tours to prospective and incoming graduate students and sponsors the annual Graduate Student Orientation. The GSA represents graduate student views on various University-wide committees, and distributes a newsletter

that provides information on academic, social, and professional opportunities on campus. All graduate students automatically become members of the GSA, and active participation is encouraged. To contact the GSA, write: The Graduate Student Association, TU Box 1960, Towson University, Towson, MD 21252.

### **The Women's Center**

*Media Building, Room 203, 410-830-2666*

*Office Hours: Monday – Friday*

*9:00 a.m. – 4:30 p.m.*

The Women's Center has a kitchen, office, and drop-in lounge for study, conversation, eating, or relaxation. All center activities and services are available to men and women students. The center offers a variety of services and activities throughout the academic year, including a referral service for professionals in law, medicine, mental health, etc. The center also administers the Charlotte W. Newcome Foundation Scholarship for women 25 years of age and over. The deadline for applications is in April.

### **Office Of Diversity**

*University Union, Room 217, 410-830-2051*

*Office Hours: Monday – Thursday*

*8:30 a.m. – 7:00 p.m.,*

*Friday 8:30 a.m. – 4:30 p.m.*

The Office of Diversity helps to create and maintain an environment conducive to the recruitment, retention, and graduation of students of color. The office sponsors a variety of programs, including the Graduate Diversity Grant (previously known as the Graduate Other Race Grant) and the Black Graduate Support Group (BGSG), which provides students with information regarding University hours and services, scholarships, social opportunities, and access to study groups.

### **African-American Cultural Center**

*University Union, Room 317, 410-830-2641*

The African-American Cultural Center is committed to promoting the history and culture of African-Americans at the University and in the surrounding communities. The center houses an extensive collection of African

and African-American art, artifacts, journals, newspapers, books, and recordings. Throughout the year, the center supports exhibits, plays, films, lectures, and discussion groups on social, political, and historical issues. For example, the center sponsors the Towson University Gospel Choir and the African-American Acting Troupe. The center also publishes a newsletter called *Ebony Notes* and broadcasts a weekly radio show called "Mahogany Magazine." Club Blue Note, a yearly celebration of student and faculty art, including live jazz, poetry readings, and food, also receives support from the center.

### **International Student Center**

*Media Center, Room 201*

The International Student Center is an important resource for international graduate students on immigration matters, University regulations and services, and personal and academic concerns. The International Student Center also sponsors a variety of intercultural programs and trips around the mid-Atlantic area. Other resources for international students at Towson University include the International Club, sponsored by the Student Government Association, and the English Language Center.

### **Jewish Student Center**

*Newell Hall, 410-830-3889*

*Office Hours: Open daily at 10:00 a.m.*

The Jewish Student Center offers a full range of social, cultural, educational and religious programs, including a Kosher dining program. Recently refurbished facilities include a recreation area, audio-visual center, lounge, and library.

### **Office For Students With Disabilities**

*Dowell Hall, Second Level, 410-830-2638 or 830-3475, voice/tdd*

*Office Hours: Monday – Friday*

*8:00 a.m. – 4:30 p.m.*

The Office for Students with Disabilities provides academic support services to ensure equal access to programs offered by the University. Services include assistance in course

selection, reader services for blind and dyslexic students, interpreters for deaf students, a liaison with the Division of Vocational Rehabilitation, notetaking and transcribing services, information on assistive technology equipment at the University, mobility services, and information on accessible parking and residential facilities. Prospective students with disabilities should contact the office as early as possible to ensure the timely provision of necessary individualized services.

### **Office of Veterans Affairs**

*Administration Building, 410-830-2097*

*Office Hours: Monday - Friday,  
8:30 a.m. - 4:30 p.m.*

The office provides coordination between veteran/dependent students and the Baltimore regional office of the Department

of Veterans' Affairs. The coordinator establishes procedures and prepares forms and correspondence for eligible students to receive educational benefits. Additionally, that officer monitors class attendance and evaluates academic progress to ensure that those receiving benefits maintain satisfactory progress. This officer also supervises the employment of VA work/study students. Students taking courses at another institution concurrently with courses at Towson may be certified for both institutions by the TU coordinator.

The normal time for processing an enrollment certification is six weeks. Certification is not automatic. The proper VA forms must be completed each semester.





# COURSE DESCRIPTIONS

Descriptions of 500-800-level courses are listed in this section. Consult the course schedules to determine the courses offered in a particular session.

Two semester courses, the numbers of which are separated by a hyphen, are to be taken in sequence.

## ACCOUNTING (ACCT) —————

**ACCT 601 FINANCIAL ACCOUNTING FOR NON-ACCOUNTANTS (3)** Basic postulates, principles and assumptions of financial accounting. Includes review of GAAP, external reporting and non-profit accounting. Prerequisites: A non-accounting degree and admission to the graduate program or permission of the chairman of the Accounting Department.

**ACCT 701 MANAGERIAL ACCOUNTING FOR ACCOUNTANTS (3)** Principles and techniques underlying managerial accounting. Techniques of standard costing and principles of valuation applicable to internal use of accounting information. Prerequisites: ACCT 601, admission to the graduate program or permission of the Accounting Department Chairperson.

## ADULT EDUCATION (ADED) —————

**ADED 585 ADULT EDUCATION (3)** Introduction to the historical and philosophical evolution of adult education in the United States in relationships to current aims, types of programs, and issues. Prerequisite: Consent of instructor.

**ADED 587 TEACHING THE ADULT LEARNER (3)** Teaching-learning activities at various levels of adult education. The needs, motivation, and abilities of the adult learner are stressed. Prerequisite: Consent of instructor.

## ANTHROPOLOGY (ANTH) —————

**ANTH 501 ANTHROPOLOGICAL THEORY (3)** Survey of the theoretical contribution made by American, British and Continental anthropologists. Prerequisites: ANTH 207 plus nine hours of Anthropology.

**ANTH 521 SEX ROLES IN CROSS CULTURAL PERSPECTIVE (3)** Materials from a variety of cultures will be used to illustrate and analyze the roles of women and men within the major institutional aspects - the family, economics, politics and religion. Particular attention will be devoted to the similarities and differences in sex role patterns within and between the cultures. Prerequisite: SOCI 101 or ANTH 207.

**ANTH 530-539 TOPICS IN ANTHROPOLOGY (3)** An examination of current topics in Anthropology designed for non-majors as well as majors. The content of the course will depend upon mutual faculty and student interest. Prerequisite: ANTH 207.

**ANTH 546 WEALTH, POWER & POLITICS IN CROSSCULTURAL PERSPECTIVE (3)** Political systems and the distribution of power in egalitarian, ranked, and stratified societies will be examined. Prerequisite: SOCI 101 or ANTH 207.

**ANTH 564 RELIGION, MAGIC AND WITCHCRAFT (3)** The world view, beliefs and rituals of selected non-literate peoples considered with reference to religion as a universal category of human culture. Prerequisite: ANTH 207.

**ANTH 565 NORTH AMERICAN INDIANS (3)** The traditional culture of native North Americans and their socio-cultural place in modern American society will be examined. Prerequisite: ANTH 207.

**ANTH 566 SOUTH AMERICAN INDIANS (3)** Survey of the cultures of the native people of South America in Pre-Columbian times and the situation of contemporary tribal peoples of South America. Prerequisite: ANTH 207.

**ANTH 567 PEOPLES OF THE MIDDLE EAST (3)** Survey of the Middle East as a cultural area with emphasis on culture change. Prerequisite: ANTH 207.

**ANTH 568 COMPARATIVE INDUSTRIALIZATION (3)** Analyzes the industrial experiences of selected contemporary populations in developed and developing nations. Prerequisite: ANTH 207 or SOCI 101.

**ANTH 569 TRADITION AND REVOLUTION IN LATIN AMERICAN SOCIETY (3)** An anthropological perspective will be brought to bear on contemporary Latin American culture and society. The Pre-Columbian heritage, the traditional synthesis and the struggle to modernize and develop will be examined. Prerequisites: SOCI 101, ANTH 207 or ANTH 208.

**ANTH 570-579 SPECIAL TOPICS IN ANTHROPOLOGY (1-3)** An examination of current topics in Anthropology designed for junior and senior majors. The content of the course will depend upon mutual faculty and student interest. Prerequisites: ANTH 207 and six additional hours of Anthropology.

**ANTH 581 ARCHAEOLOGICAL METHODS AND THEORY (3)** Methods of excavating and recording archaeological data. Investigation of problems of current research interest. Prerequisite: ANTH 207.

**ANTH 588 PEASANT CULTURES (3)** The course will focus on the rural agricultural

population of modern states, their traditional lifeways and the changes being wrought by modernization. Prerequisite: SOCI 101 or ANTH 207.

**ANTH 591-592 INTERNSHIP IN ANTHROPOLOGY I, II (3, 3)** Supervised experience in work setting with facilitates understanding of rules and relationships relevant to anthropological inquiry and application of anthropological knowledge. While opportunities to do anthropologically oriented fieldwork in the community will usually be available, placement in agencies dedicated to anthropological inquiry may not always be possible. Students may elect to take one semester for 3 credits (591) or two semesters for 3 credits each (591-592), in one agency for both semesters or in a different agency each semester. No more than three credits may be earned in a semester save with consent of the chair which will be granted only when agency requirements and student needs make it appropriate. Prerequisite: Concentration in anthropology; junior standing and consent of internship.

**ANTH 595 INDEPENDENT RESEARCH (3)** Supervised research and anthropological investigation leading to preparation of a research project or a supervised field experience. For senior students with a concentration in anthropology. Prerequisites: At least 12 credits in ANTH and consent of department chair.

## ART (ART AND ARED) \_\_\_\_\_

**ART 500 CERAMIC RAW MATERIALS (3)** Lecture and laboratory investigation of ceramic materials as they apply to glazes, clay slips and clay bodies. Tests and problems in ceramic raw materials. Prerequisite: ART 331 or equivalent.

**ART 508 CLAY SCULPTURE (3)** Studio experience utilizing a variety of ceramic techniques. Problems in sculptural directions for students experiences in handbuilding and the potter's wheel. Prerequisite: ART 310 or consent of instructor.

**ART 513 ENAMELING II (3)** Continued studio experience in enameling. Emphasis on advanced techniques of cloisonne, plique-a-jour, independent work, and personal expression are encouraged. Taught concurrently with ART 314. Prerequisite: ART 314.

**ART 514-515-516 ADVANCED STUDIO (2-3, 2-3, 2-3)** Independent work for advanced students in field of special interest. Prerequisites: Must have exhausted other courses in particular field or written consent of instructor. Student must make arrangements in advance of registration with instructor of choice.

**ART 518 JEWELRY II (3)** Continued studio experiences in jewelry. Directed studio problems in the techniques of casting, fabrication, raising, forging, stone setting, with an emphasis on independent work and personal experience. Prerequisite: ART 318.

**ART 519 METALSMITHING (3)** Lecture, demonstration, and directed studio problems in raising, forging, joining, and finishing various metals with emphasis on design and creation of hollowware and flatware. The historic and aesthetic aspects of the media are considered. Prerequisite: ART 318.

**ART 521 DESIGN FOR VISUAL COMMUNICATION II (3)** Continued studio in drawing, painting and typography. Advanced assignments in preparing brochures - booklets - for commercial printing. Prerequisites: ART 225 or consent of instructor.

**ART 528 WEAVING II (3)** Continued studio experience in weaving. Further investigation into a variety of weaves on various warp threadings with experimentation into color, fiber, and woven forms. Prerequisite: ART 328.

**ART 529 ADVANCED PAINTING: OILS (3)** Individually selected studio problems in oils and related media for advanced students in area of special interest. Prerequisite: ART 329.

**ART 530 ADVANCED PAINTING: WATERCOLOR (3)** Individually selected studio problems in watercolor and related media for advanced students in area of special interest. Prerequisite: ART 330.

**ART 534 PHOTOGRAPHY II (3)** Aesthetic of black and white photography using advanced photographic processes and electronic imaging techniques. (May be taken concurrently with ART 321). Prerequisites: ART 234 and ART 321.

**ART 535 COLOR PHOTOGRAPHY III (3)** Aesthetic of color photography using advanced color photographic processes, alternative media processes, and electronic imaging techniques. (May be taken concurrently with Art 321). Prerequisites: ART 234 and ART 321.

**ART 536 PHOTOGRAPHY IV (3)** Advanced research into the aesthetic of photographic imaging through the use of black and white, and color photo processes, alternative media processes, and electronic imaging technology. (ART 421 may be taken concurrently). Prerequisites: ART 334, ART 335, ART 421.

**ART 539 METAL SCULPTURE II (3)** Continued lecture and directed studio problems in direct or cast metal sculpture. Prerequisite: ART 339.

**ART 540 SCULPTURE: MODELING STUDIO III (3)** Continued studio experience in modeling with the opportunity for advanced students to develop interest in specialized areas. Prerequisite ART 340.

**ART 542 SCULPTURE: CARVING STUDIO III (3)** Continued studio experience in carving; individually selected studio problems in area of special interest. Prerequisite: ART 342.

**ART 547 SCREEN PROCESS II (3)** Advanced color projects using direct photo emulsion emphasize integration of hand drawn im-

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age with photo and computer generated images. Non-toxic water-based inks.

**ART 549 RELIEF PROCESS II (3)** Traditional and experimental processes. Advanced color assignments using oil and water-based inks.

**ART 550 INTAGLIO PROCESS II (3)** Multiple plate color and simultaneous color/intaglio/relief techniques. Further investigation into collagraph using experimental materials. Prerequisite: ART 449 or consent of instructor.

**ART 553 LITHOGRAPHIC PROCESS II (3)** Personal expression; advanced printing including stone-plate and photo plate. Multiple color printing. Prerequisite: ART 451 or consent of instructor.

**ART 557 GRAPHIC DESIGN III (3)** Problems in graphic communication on the Macintosh, emphasizing individual portfolio development. Prerequisites: ART 417 (UG&G)

**ART 561 INTRODUCTION TO ART THERAPY I (3)** A survey of the concepts and procedures of creative expression in the service of personal understanding and development. Consideration of educational, rehabilitative and psychiatric settings. Lectures, discussions, workshops, and readings. Prerequisite: At least junior standing as a major in Art, Psychology, Health, Mental Health or associated fields. Approved work experience in one of the above fields may be substituted. (Offered evening only)

**ART 562 INTRODUCTION TO ART THERAPY II (3)** Continuation of Art Therapy I, the work of the therapist. Case studies, observations and participation in a variety of settings. Discussion, field work and readings. Prerequisite: ART 461 or consent of instructor. (Offered spring semester evening only)

**ART 573 ILLUSTRATION II (3)** Continued studio experience in illustration. Devel-

oping personal approaches in various media. Emphasis on practicing professional assignments and portfolio preparation. Prerequisite: ART 373 or equivalent.

**ART 594 TRAVEL AND STUDY ABROAD (3-6)** Countries and topics to be selected by the department and instructors sponsoring the program. For information, contact the ART Department early in the semester preceding the semester of travel study. Prerequisite: Consent of instructor and interview.

**ART 608 GRADUATE CERAMICS I (3)** Advanced problems in selected ceramic areas.

**ART 611 GRADUATE DRAWING I (3)** Studio problems in expressive drawing. Prerequisite: ART 211 or consent of instructor.

**ART 614-615-616 GRADUATE STUDIO (2-3, 2-3, 2-3)** Independent work for graduate students in field of special interest. Prerequisite: all courses in field completed, and written consent of instructor.

**ART 618 GRADUATE JEWELRY I (3)** Studio problems in shell construction, stone setting and mechanical joinery. Prerequisite: ART 418 or consent of instructor.

**ART 620 GRADUATE GRAPHIC DESIGN I: TYPOGRAPHY (3)** Studio problems in selected typeface areas. Classics to exotic computerized fonts will be compared. Prerequisite: ART 320 or consent of instructor.

**ART 626 GRADUATE FABRIC DESIGN: DYEING (3)** Studio problems in batik, Katazome, shibori, plangi, tie-dye, stencil, and the direct application of dye on fabric. Prerequisite: ART 426.

**ART 627 GRADUATE FABRIC DESIGN: PRINTING (3)** Studio problems in screen printing and/or block printing. Prerequisite: ART 427

**ART 629 GRADUATE PAINTING I (3)** Studio problems in painting; current trends,

museum visits and lectures. Prerequisite: ART 329 or equivalent.

**ART 630 WATERCOLOR (3)** Trends and outstanding painters and styles. Studio work, museum visits, lectures. Prerequisite: ART 330 or consent of instructor.

**ART 632 GRADUATE COMPUTER ART (3)** Advanced knowledge and aesthetic insight through computer art production. Lectures, demonstrations, gallery visits, and studio work in art department lab. Prerequisites: Consent of instructor.

**ART 633 GRADUATE CERAMICS: SPECIAL PROCESSES (3)** An in-depth exploration of techniques including moldmaking, casting, the use of engobes, clay bodies, lusters and decals. Minimester only.

**ART 634 GRADUATE PHOTOGRAPHY I (3)** Studio problems emphasizing personal investigation of the photographic medium as an art form. Prerequisites: consent of instructor and ART 334.

**ART 635 GRADUATE EXPERIMENTAL DIRECTIONS (3)** Conceptual, installation, and performance art. Studio projects. Prerequisites: Consent of instructor.

**ART 640 GRADUATE SCULPTURE I (3)** Studio problems in selected sculptural areas. Prerequisite: ART 340, or ART 241, or ART 339, or ART 342 or any 400-level course, or consent of instructor.

**ART 650 GRADUATE INTAGLIO, RELIEF I (3)** Studio problems in intaglio and/or relief processes, including mixed media. Prerequisite: ART 349, or ART 449 or equivalent.

**ART 653 GRAPHICS: LITHOGRAPHY, SERIGRAPHY (3)** Studio work for artists with knowledge of lithography and/or serigraphy. Prerequisite: ART 347, or ART 451 or equivalent.

**ART 673 GRADUATE ILLUSTRATIONS I (3)** Studio problems in the concepts and techniques of objectives rendering, expressive painting and sequential imagery. Prerequisite: ART 463 or consent of instructor.

**ART 708 GRADUATE CERAMIC II (3)** Studio problems in selected ceramic areas.

**ART 711 GRADUATE DRAWING II (3)** Studio problems in selected drawing areas: awareness, imagination, and craftsmanship. Prerequisite; ART 611.

**ART 715 MFA STUDIO I (3)** Independent problems in art. May be repeated for additional credit with art advisor consent. Prerequisites: MFA status and written consent of art advisor.

**ART 718 GRADUATE JEWELRY II (3)** Studio problems in advanced shell construction and surface embellishment. Prerequisite: ART 618.

**ART 720 GRADUATE GRAPHICS DESIGN II: PORTFOLIO (3)** Studio problems in professional portfolio presentation. Prerequisite: ART 620 or consent of instructor.

**ART 729 GRADUATE PAINTING II (3)** Studio problems in selected painting areas: watercolor, oil and other media. Prerequisite: ART 629.

**ART 731 GRADUATE CERAMICS III (3)** Studio problems in selected ceramic areas. Prerequisite: ART 708.

**ART 734 GRADUATE PHOTOGRAPHY II (3)** Studio problems in selected areas of photography and emphasizing personal investigation of mixed media. Prerequisite; ART 634.

**ART 740 GRADUATE SCULPTURE II (3)** Studio problems in selected sculptural areas. Prerequisite: ART 640 or consent of instructor.

**ART 750 GRADUATE INTAGLIO, RELIEF II (3)** Studio problems in selected printmaking areas: etching, drypoint, aquatint, photo engraving, embossing, collographs, woodcuts, linecuts, wood engraving, and subtractive relief. Prerequisite: ART 650.

**ART 781 GRADUATE ILLUSTRATION II (3)** Studio problems in location drawing, figure and costume, experimental media, manuscript interpretation, and portfolio analysis. Prerequisite: ART 673.

**ART 783 M.F.A. SEMINAR (3)** Lectures and discussions on the contemporary art scene, aesthetics, and art concepts. Oral and written presentations, gallery/museum/studio visits included. Prerequisite: M.F.A. candidate.

**ART 784 SEMINAR ON COLLEGE LEVEL TEACHING (3)** Organization and management of studio art classes; critiquing skills, creation and presentation of assignments, developing outlines and grading. Prerequisite: Second year MFA graduate students and M.ED graduate students with departmental consent.

**ART 785 M.F.A. STUDIO II (3)** Independent problems in art with special emphasis on preparation for M.F.A. project. Prerequisite: Must be taken concurrently with ART 896 M.F.A. project.

**ART 795 DIRECTED READING IN ART (3)** Extensive reading in an aspect of art. Prerequisite: Graduate standing and consent of art advisor.

**ART 896 M.F.A. PROJECT (6)** Preparation and installation of selected art works in an exhibition format as a final review for the M.F.A. degree. A written supportive paper defining the scope and philosophy of the work. Prerequisites: To be taken concurrently with ART 715 during final semester of the program.

**ART 897 GRADUATE PROJECT IN ART (3)** Exhibition of project plus a paper defining the project's scope and philosophy. Prerequisite: consent of department chairperson.

**ART 898 THESIS (6)** Original investigation in art, art education, art history or other approved area. Prerequisite: ARED 797.

**ART 899 THESIS CONTINUUM (1)**

## ART EDUCATION (ARED) —————

**ARED 571 ADVANCED ART EDUCATION (3)** Art education problems at all levels; materials and skills in relation to classroom needs. Prerequisite: ARED 371 or equivalent.

**ARED 609 MULTICULTURAL ART EDUCATION (3)** The study of non-western arts and crafts from around the world. Includes investigation of cultural contexts, studio processes, and teaching strategies in grades K-12. Prerequisites: Graduate standing.

**ARED 695 RESEARCH IN ART AND ART EDUCATION (3)** Methods of research applicable to art and art education. Preparation of research outline in area of choice. Prerequisite: consent of instructor.

**ARED 797 SEMINAR IN ART EDUCATION (3)** Investigation of problems and theories in art education and related fields. Prerequisite: ARED 695 and consent of instructor.

## ART HISTORY (ARTH) —————

**ARTH 585 SEMINAR IN ART HISTORY (3)** Intensive analysis of a single artist, a defined historical period for a stylistic development. Directed reading in both period and contemporary sources. Discussions and museum tours. Variety in content each semester. Prerequisites: ARTH 222 and one upper division art history or consent of instructor.

**ARTH 595 INDEPENDENT STUDY IN ART HISTORY (3)** Advanced research and examination of a topic in Art History. Prerequisites: Art Survey I, Survey II, and at least one 300 level Art History.

**ARTH 596 INDEPENDENT STUDY IN ART HISTORY (3)** Advanced research and examination of a topic in Art History. Prerequisites: Art Survey I, Survey II, and at least one 300 level Art History.

**ARTH 597 INDEPENDENT STUDY IN ART HISTORY (3)** Advanced research and examination of a topic in Art History. Prerequisites: Art Survey I, Survey II, and at least one 300 level Art History.

**ARTH 681 SEMINAR IN ART HISTORY (3)** Research on an architect, artist, or historical movement. Prerequisites: Graduate standing.

**ARTH 770-779 SPECIAL TOPICS: ART HISTORY (3)** Selected topics designed for independent research in art. Prerequisites: Graduate standing and consent of art advisor.

**ARTH 795 DIRECTED READINGS IN ART HISTORY (3)** Extensive reading on a period, development or aspect of art. Prerequisite: Consent of instructor.

## BIOLOGY (BIOL) \_\_\_\_\_

**BIOL 501 GENETICS (4)** Introduction to genetics including Mendelian genetics, linkage and mapping, nucleic acid structure, replication and function, protein synthesis and the genetic code, mutation, gene regulation in bacteria and viruses, and population genetics. Laboratory includes work with *Drosophila*, fungi, bacteria and viruses. Average of three laboratory hours per week. Prerequisites: BIOL 110 or BIOL 201, CHEM 330 or CHEM 331 (may be taken concurrently).

**BIOL 502 GENERAL ECOLOGY (4)** Interrelationship between animals, plants and their natural environments, emphasizing the specific biomes available for study in Maryland. Individual projects will be required. Average of three laboratory hours per week. Prerequisites: BIOL 110 or 201, and either BIOL 202 or 205 or 207.

**BIOL 503 ADVANCED GENETICS (3)** Emphasis on the molecular basis of gene action. Discussion of current work and methods related to the problem of gene structure, function, and mutation including the translation and regulation of genetic information. Prerequisite: BIOL 401 or its equivalent.

**BIOL 504 ECOLOGICAL TECHNIQUES (3)** Lectures and readings on investigative techniques employed by ecologists in the various specialty fields. An individual investigation, laboratory or field, using appropriate equipment, is required. Prerequisite: BIOL 402 or its equivalent.

**BIOL 505 ELECTRON MICROSCOPY (4)** Theory, preparation, and application of the electron microscope, including light microscopy. Average of three laboratory hours per week. Prerequisites: 12 hours of biology, PHYS 212 recommended, and consent of instructor.

**BIOL 506 LIMNOLOGY (4)** Physical, chemical, and biological factors that affect fresh-water organisms, and some of the standard methods used to analyze these factors. Average of two laboratory hours per week. Prerequisites: BIOL 205, BIOL 207, BIOL 402 is recommended CHEM 102, PHYS 212.

**BIOL 507 INTRODUCTION TO PALEONTOLOGY (4)** Examination of major forms of life with the emphasis on appearances, diversification, and extinctions during the different geologic periods. Prerequisite: Minimum 10 credits in Biology.

**BIOL 508 CELL BIOLOGY (4)** The molecular and morphological organization of the cell in relationship to cellular activities with emphasis on eukaryotic cells. Average of three laboratory of discussion hours per week. Prerequisites: BIOL 207, BIOL 214 or BIOL 311; CHEM 330.

**BIOL 509 LIFE SCIENCES FOR THE ELEMENTARY TEACHER (3)** Living organisms in the environment, emphasizing modes of scientific inquiry and the utilization of living organisms in the classroom. Prerequisite:

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quisite: BIOL 110. Not for credit toward biology major, minor or M.S. degree in Biology.

**BIOL 510 ENVIRONMENTAL CONSERVATION (4)** Conservation practices and problems. Soil, water, forest, and wildlife resources with emphasis on interrelationships. Specialists in various phases of local, state, and federal conservation work conduct or assist in numerous field trips. Average of three laboratory hours per week. Prerequisites: BIOL 110 or 201 and 10 hours of Biology or a combination of 10 hours from biology, geography and physical sciences.

**BIOL 511 WILDLIFE BIOLOGY (4)** Important wildlife species with emphasis on aspects of research and management. Specific techniques and problems are studied in the field. Average of three hours per week in laboratory and field work. Prerequisite: BIOL 207.

**BIOL 512 INSTRUMENTAL METHODS FOR BIOLOGISTS (4)** Principles of electronics, data management, analytical techniques, radioisotope applications, and physiological monitoring methods. Average of four laboratory hours per week. Prerequisites: BIOL 205 or 207; PHYS 203 or 242; CHEM 102 and 210 or 211, or consent of instructor.

**BIOL 513 EVOLUTION (3)** Concepts of biological evolution, the history of the development of these concepts, and current topics in evolutionary biology. Prerequisites: BIOL 202 and either BIOL 205 or 207.

**BIOL 515 MEDICAL MICROBIOLOGY (4)** Pathogenesis of bacterial, viral, rickettsial and fungal diseases with emphasis on medically important bacteria and microbiological techniques. Recommended for students pursuing a career in medical sciences. Prerequisites: BIOL 110 or BIOL 201; CHEM 102 or CHEM 106 (may be taken concurrently). Either this course or BIOL 518 but not both may count toward M.S. degree in Biology.

**BIOL 517 MICROTÉCHNIQUE (4)** Techniques used in preparation of plant and animal tissues for histological examination.

Average of three laboratory hours per week. Prerequisites: BIOL 110 or BIOL 201. (CHEM 102 may be taken concurrently).

**BIOL 518 MICROBIOLOGY (4)** Biology of microorganisms with emphasis on bacteria. Microbial morphology, physiology and genetics and the role of microorganisms in natural processes and disease. Laboratory includes methods of observing, isolating and identifying bacteria. Average of three laboratory hours per week. Either this course or BIOL 315 but not both may count toward M.S. degree in Biology. Prerequisites: CHEM 330 or CHEM 331 (may be taken concurrently).

**BIOL 521 IMMUNOLOGY (3)** Fundamental principles of immunology with emphasis on the nature of antibodies and antigens, blood groups, antibody-antigen reactions, hypersensitivity, auto-immunization, tumor immunology, artificial grafting and the preparation of vaccines. Prerequisites: BIOL 315 or 318.

**BIOL 522 ADVANCED IMMUNOLOGY (2)** An advanced study of current topics in immunology including humoral and cell-mediated immunity, histocompatibility, hypersensitivity, autoimmunity, tumor immunology, immunologic disorders and the use of monoclonal antibodies as a research tool. Prerequisite: A formal course in immunology (BIOL 421 or its equivalent) or prior experience in immunology with consent of instructor.

**BIOL 525 DISSECTION OF THE UPPER EXTREMITY (2)** Gross anatomical dissection of the human upper extremity including the muscles, nerves and blood vessels which supply the appendage. Special emphasis will be placed on development of techniques which assure careful and accurate dissection. Will be offered only in the minimester. Prerequisites: BIOL 213 or 311 and consent of instructor.

**BIOL 528 VIROLOGY (3)** Pathogenesis, morphology, and life cycles of bacterial, animal and/or plant viruses. Emphasis will be on animal viruses causing disease in humans. Prerequisites: BIOL 315 or 318.

**BIOL 530 HORTICULTURE (4)** Plant culture and application to developing desirable planting on home grounds or in public places with examples of appropriate types of plants for specific situations. Average of three laboratory hours per week. Prerequisite: BIOL 205.

**BIOL 531 PLANT MORPHOLOGY (4)** A survey of the plant kingdom with emphases on evolutionary relationships, morphology, and life histories as affected by environmental conditions. A Saturday field trip may be required. Average of three laboratory hours per week. Prerequisite: BIOL 205.

**BIOL 532 VASCULAR PLANT TAXONOMY (4)** A study of the history and principles of vascular plant systematics with laboratory time devoted to collection and identification of plants in the local flora. An average of three laboratory hours per week. Prerequisites: BIOL 205, BIOL 331 or consent of instructor.

**BIOL 535 PLANT ECOLOGY (4)** Environmental factors and processes which control plant distribution, plant communities, and vegetational biomes of North American. An average of 3 laboratory hours per week with 2 required 3-day weekend field trips and a Saturday field trip emphasizing examples from Maryland and the Mid-Atlantic States. Prerequisites: BIOL 202 and 205.

**BIOL 536 PLANT PHYSIOLOGY (4)** Life functions of plants as related to structure at all levels: cells, organs, and the complete organism. Consideration of the interaction of environmental and genetic factors on plant metabolism. Average of three laboratory hours per week. Prerequisites: BIOL 205 and CHEM 102, CHEM 330 recommended.

**BIOL 539 PLANT ANATOMY (4)** Origin and development of organs and tissue systems in vascular plants. Average of three laboratory hours per week. Prerequisite: BIOL 205.

**BIOL 541 PLANT PATHOLOGY (4)** Plant diseases, their symptoms, casual agents, etiology, epidemiology, prevention, and con-

trol. Average of three laboratory hours per week. Prerequisite BIOL 205.

**BIOL 543 FRESH WATER ALGAE (4)** Systematics, structure, ecology, physiology, and life histories of fresh water algae. Laboratory will include methods of collection, culture, and experimental study of selected species. Prerequisites: BIOL 205, BIOL 331 recommended.

**BIOL 545 MYCOLOGY (4)** Morphology, classification, life histories, and economic applications of the fungi. Average of three laboratory hours per week. Prerequisite: BIOL 205.

**BIOL 549 MARINE BOTANY (4)** The ecology, physiology and identification of marine plants emphasizing the Chesapeake Bay and coastal areas of Maryland. Prerequisites: BIOL 347, BIOL 331 strongly recommended.

**BIOL 551 FIELD AND SYSTEMATIC VERTEBRATE ZOOLOGY (4)** Evolution, distribution, and definitive features of each class are studied comparatively. Extensive field and laboratory work deals with morphological, taxonomic, ecological, and behavioral features of selected vertebrate groups and species. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 553 INVERTEBRATE ZOOLOGY (4)** Aquatic and terrestrial species of phyla from the Protozoa through the Echinodermata with special emphasis on local forms. Economic, ecological, and taxonomic considerations. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 556 ORNITHOLOGY (4)** Systematics, distribution, physiology, behavior and ecology of birds. Emphasis is on bird identification and techniques of studying birds in the field. Several early morning field trips are required. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 558 MAMMALOLOGY (4)** Evolution, comparative morphology, systematics, and distribution of mammals. Representative life histories are considered. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 560 HISTOLOGY (3)** Tissues of the vertebrate body. Average of two laboratory hours per week. Prerequisite: BIOL 311 or BIOL 214.

**BIOL 561 ENTOMOLOGY (4)** Laboratory and field course in insects. Identification and recognition of the more common families and orders, and a study of their structure, behavior, ecology, economic importance, and control. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 563 ANIMAL EMBRYOLOGY (4)** Developmental anatomy and the underlying principles involved in development. This last area will be approached from an experimental base. Average of three laboratory hours per week. Prerequisite: BIOL 214 or BIOL 311.

**BIOL 565 MAMMALIAN PHYSIOLOGY (4)** Organ systems of mammals with special emphasis on the human. Average of three laboratory hours per week. Prerequisites: BIOL 213, BIOL 214, or BIOL 311; and CHEM 102.

**BIOL 567 HERPETOLOGY (4)** Systematic survey of the modern reptiles and amphibians. Emphasis is placed on the evolution of morphological and behavioral traits which have enabled the reptiles and amphibians to successfully exploit their individual habitats. Laboratory includes systematic classification, student seminars and field work. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 568 ENDOCRINOLOGY (3)** Endocrine mechanisms regulating homeostasis and functional integrity of animals with emphasis on vertebrates. Prerequisites: BIOL 214 or BIOL 311, CHEM 102.

**BIOL 569 COMPARATIVE ANIMAL PHYSIOLOGY (4)** Functions, interactions, and regulation of organ systems in animals and their roles in sensory perception and integration, movement, oxygen utilization, energy procurement, temperature regulation, and water metabolism. Prerequisites: BIOL 207, CHEM 102.

**BIOL 571 ANIMAL BEHAVIOR (4)** Ethological approach to the comparative study of animal behavior. Major emphases are on the adaptive function of behavior and classification of behavioral mechanisms. Average of three laboratory hours per week. Prerequisite: BIOL 207.

**BIOL 581 DIRECTED READINGS IN BIOLOGY (1-3)** Independent reading in an area selected by the student in consultation with the instructor. May not be applied toward M.S. degree in Biology. Prerequisite: minimum of 10 hours in biology.

**BIOL 585 SEMINAR IN MICROBIOLOGY AND CELLBIOLOGY (1)** Current research articles in cell biology and microbiology are reviewed. May be taken for a maximum of 2 credits. Prerequisites: Twelve credit hours in Biology including BIOL 315, 318, 501, or 408.

**BIOL 594 TRAVEL STUDY (1-3)** A detailed investigation of field oriented problems in biology away from the Towson State campus. Location and topics to be selected by the department and instructors sponsoring the program. May be repeated for a maximum of 3 credits. Prerequisites: BIOL 110 and consent of instructor.

**BIOL 601 CURRENT TOPICS IN BIOLOGY (3)** Current topics in a specific area of biology. The area will vary each time the course is offered. A maximum of three credits allowable for M.S. in Biology. Prerequisite: a suitable background in the area emphasized.

**BIOL 602 MOLECULAR BIOLOGY (3)** Molecular biology, emphasizing replication,

transcription, and translation. Prerequisite: Graduate standing in the Biological Sciences.

**BIOL 604 MECHANISMS IN ANIMAL PHYSIOLOGY (3)** Functional design of animal organ systems discussing selected adaptations permitting survival in challenging environments. Prerequisite: Students must meet the requirements for admission to the Master's Degree Program in Biological Sciences.

**BIOL 605 PROBLEMS IN BIOLOGY (1-3)** Laboratory or literature research on a particular problem of interest to the student that does not pertain to his/her thesis. Regular conferences with the instructor are required. A maximum of three credits allowable for MS degree in Biology.

**BIOL 607 PHYSIOLOGICAL ANIMAL ECOLOGY (4)** Physiological responses of animals to varying ecological conditions. Prerequisites: BIOL 603, BIOL 610.

**BIOL 609 AQUATIC BIOLOGY (4)** Local freshwater and brackish water plants and animals. Representative habitats considered comparatively, using methods of collecting and identifying species of the fauna and flora. Prerequisite: BIOL 506 and BIOL 610.

**BIOL 610 POPULATION AND COMMUNITY BIOLOGY (3)** Processes in biological populations, including population growth, competition, and predation, analyzed by the use of conceptual systems models and simple mathematical models. Prerequisites: BIOL 401, BIOL 402, BIOL 413, or equivalents.

**BIOL 611 BIOCHEMICAL GENETICS (3)** Biochemical basis of genetic phenomena, including duplication, expression, organization, and recombination of DNA. Prerequisites: BIOL 401, BIOL 602, CHEM 351 or consent of instructor.

**BIOL 613 ANIMAL COMMUNICATION (3)** Survey of visual, chemical, electromagnetic and acoustical systems which have

evolved to facilitate information exchange between animals. Attention is focused on the sensory mechanisms employed during communication, as well as the adaptive significance of the message to the sender and the receiver. Prerequisite: A suitable background in animal behavior and BIOL 610.

**BIOL 615 PATHOGENIC MICROBIOLOGY (3)** Pathogenic bacteria and viruses, including virulence of causative agents, epidemiology, pathogenesis, diagnosis, prevention and treatment of representative bacterial and viral diseases. Prerequisites: BIOL 521, BIOL 315 or 318, CHEM 330 or 332.

**BIOL 617 MOLECULAR MECHANISMS OF DEVELOPMENT (3)** Molecular and Cellular aspects of developmental processes. Emphasis on vertebrate development. Prerequisites: BIOL 217, CHEM 330 or BIOL 602.

**BIOL 632 PLANT BIOSYSTEMATICS (4)** Techniques employed in the analysis of vascular plant life histories and species variation. Emphasis on local flora. Prerequisite: BIOL 331; BIOL 432 recommended.

**BIOL 635 PHYSIOLOGICAL PLANT ECOLOGY (3)** Interactions of plants with the physical environment at a biochemical, physiological and organismal level of integration. Prerequisite: BIOL 502 or 535 or 536.

**BIOL 636 PLANT PHYSIOLOGICAL ECOLOGY: METHODS AND INSTRUMENTATION (2)** Methods of analysis of plant physiological responses to environmental factors. Theory, application and interpretation of measurements of plant water relations, nutrient uptake, photosynthesis and growth. Prerequisite: BIOL 635 or concurrent enrollment.

**BIOL 641 PRINCIPLES OF PHYSICAL BIOCHEMISTRY (3)** Chemical thermodynamics to bioenergetics; the application of chemical kinetics to enzyme kinetics and other time-dependent biochemical phenomena; transport phenomena with emphasis upon membrane transport, centrifugation, and an

quisite: BIOL 110. Not for credit toward biology major, minor or M.S. degree in Biology.

**BIOL 510 ENVIRONMENTAL CONSERVATION (4)** Conservation practices and problems. Soil, water, forest, and wildlife resources with emphasis on interrelationships. Specialists in various phases of local, state, and federal conservation work conduct or assist in numerous field trips. Average of three laboratory hours per week. Prerequisites: BIOL 110 or 201 and 10 hours of Biology or a combination of 10 hours from biology, geography and physical sciences.

**BIOL 511 WILDLIFE BIOLOGY (4)** Important wildlife species with emphasis on aspects of research and management. Specific techniques and problems are studied in the field. Average of three hours per week in laboratory and field work. Prerequisite: BIOL 207.

**BIOL 512 INSTRUMENTAL METHODS FOR BIOLOGISTS (4)** Principles of electronics, data management, analytical techniques, radioisotope applications, and physiological monitoring methods. Average of four laboratory hours per week. Prerequisites: BIOL 205 or 207; PHYS 203 or 242; CHEM 102 and 210 or 211, or consent of instructor.

**BIOL 513 EVOLUTION (3)** Concepts of biological evolution, the history of the development of these concepts, and current topics in evolutionary biology. Prerequisites: BIOL 202 and either BIOL 205 or 207.

**BIOL 515 MEDICAL MICROBIOLOGY (4)** Pathogenesis of bacterial, viral, rickettsial and fungal diseases with emphasis on medically important bacteria and microbiological techniques. Recommended for students pursuing a career in medical sciences. Prerequisites: BIOL 110 or BIOL 201; CHEM 102 or CHEM 106 (may be taken concurrently). Either this course or BIOL 518 but not both may count toward M.S. degree in Biology.

**BIOL 517 MICROTECHNIQUE (4)** Techniques used in preparation of plant and animal tissues for histological examination.

Average of three laboratory hours per week. Prerequisites: BIOL 110 or BIOL 201. (CHEM 102 may be taken concurrently).

**BIOL 518 MICROBIOLOGY (4)** Biology of microorganisms with emphasis on bacteria. Microbial morphology, physiology and genetics and the role of microorganisms in natural processes and disease. Laboratory includes methods of observing, isolating and identifying bacteria. Average of three laboratory hours per week. Either this course or BIOL 315 but not both may count toward M.S. degree in Biology. Prerequisites: CHEM 330 or CHEM 331 (may be taken concurrently).

**BIOL 521 IMMUNOLOGY (3)** Fundamental principles of immunology with emphasis on the nature of antibodies and antigens, blood groups, antibody-antigen reactions, hypersensitivity, auto-immunization, tumor immunology, artificial grafting and the preparation of vaccines. Prerequisites: BIOL 315 or 318.

**BIOL 522 ADVANCED IMMUNOLOGY (2)** An advanced study of current topics in immunology including humoral and cell-mediated immunity, histocompatibility, hypersensitivity, autoimmunity, tumor immunology, immunologic disorders and the use of monoclonal antibodies as a research tool. Prerequisite: A formal course in immunology (BIOL 421 or its equivalent) or prior experience in immunology with consent of instructor.

**BIOL 525 DISSECTION OF THE UPPER EXTREMITY (2)** Gross anatomical dissection of the human upper extremity including the muscles, nerves and blood vessels which supply the appendage. Special emphasis will be placed on development of techniques which assure careful and accurate dissection. Will be offered only in the minimester. Prerequisites: BIOL 213 or 311 and consent of instructor.

**BIOL 528 VIROLOGY (3)** Pathogenesis, morphology, and life cycles of bacterial, animal and/or plant viruses. Emphasis will be on animal viruses causing disease in humans. Prerequisites: BIOL 315 or 318.

**CHEM 534 ADVANCED ORGANIC CHEMISTRY LABORATORY (3)**

The design of organic synthesis, advanced laboratory techniques, and determination of structure by chemical and spectroscopic means will be taught by laboratory problems and discussion. One lecture hour and six laboratory hours. Prerequisites: CHEM 332 and consent of instructor.

**CHEM 535 ADVANCED ORGANIC CHEMISTRY (2)**

Advanced topics will include several of: molecular orbital theory, pericyclic reactions, photochemistry, and determination of reaction mechanisms by: kinetics, linear free energy relationships, acid-based properties, acid-based catalysis, detection of intermediates, stereochemistry, etc. Three lecture hours. Prerequisites: CHEM 332 and CHEM 342; CHEM 341 is recommended.

**CHEM 536 ETHICS IN THE PHYSICAL SCIENCES (2)**

Discussion of the integrity of the scientific literature and the responsibilities of scientists to peer, proteges, employers and the public. Examination of principles and of case studies in the physical sciences. Not open to students who have taken WRIT 301.

**CHEM 542 PHYSICAL CHEMISTRY - THERMODYNAMICS (3)**

Thermodynamics, phase relations, solution properties, chemical equilibrium and electrochemistry. Three lecture hours. Prerequisites: CHEM 102, MATH 274, and PHYS 222 or PHYS 212. Offered each fall.

**CHEM 543 PHYSICAL CHEMISTRY - STRUCTURE AND KINETICS (3)**

Introduction to quantum chemistry; atomic and molecular structure, atomic, and molecular spectroscopy, introduction to statistical thermodynamics, kinetic theory, and chemical kinetics. Three lecture hours. Prerequisites: CHEM 102, MATH 274, and PHYS 222 or PHYS 212. Offered each spring.

**CHEM 546 ADVANCED PHYSICAL CHEMISTRY (3)**

Two topics in the area of Physical Chemistry to be covered in depth.

Topics will be selected by the instructor after consultation with the students. Examples of possible topics are: formal wave mechanics, bonding, solid state, liquid state, surface chemistry, colloids, high polymers, rheology, ionic conductivity, electrochemical cells, scattering phenomena, statistical thermodynamics. Three lecture hours. Prerequisites: CHEM 341 and CHEM 342.

**CHEM 554 ADVANCED BIOCHEMISTRY (3)**

The use of physical methods in the study of biochemical systems, biochemical thermodynamics; the structure of proteins including X-ray crystallography, macromolecular solution thermodynamics, enzyme kinetics, and spectroscopic probing of macromolecular structure will be discussed. Three lecture hours. Prerequisite: CHEM 353 or CHEM 355.

**CHEM 562 CHEMICAL AND BACTERIOLOGICAL STUDIES ON WATER POLLUTION (3)**

Deals mainly with water pollution: causes, effects, and cures. Considers details of water and waste treatment. Emphasized technical details of analysis of water. Concerns standards of water purity and variables involved. Demonstration of analytical methods to be given. Case studies and applications are viable approaches to this topic. Three lecture hours. Prerequisites: BIOL 102 and CHEM 110. Offered through College of Continuing Studies (evening and summer) if sufficient demand.

**CHEM 564 CHEMISTRY OF DANGEROUS DRUGS (3)**

A study of the chemistry, methods of detection and analysis of narcotics, depressants, stimulants and hallucinogens. Also, the influence of physicochemical properties upon the pharmacological effects of drug-receptor interactions. Historical, forensic, and socio-economic implications associated with drug abuse will also be reviewed. Three lecture hours. Prerequisites: CHEM 330 and CHEM 350 or CHEM 331-332. Also CHEM 210 or CHEM 213/215 recommended.

**CHEM 566 POLYMER CHEMISTRY (3)**

Course will cover the following aspects of poly-

mers: structure, physical properties, methods of preparation, rheology, mechanical properties, degradation and stabilization, application and fabrication, and related contemporary topics. Carbon chain and heterochain polymers will be discussed, and spectroscopic methods of analysis (IR, UV and NMR) will be presented. Three lecture hours. Prerequisites: CHEM 101, CHEM 102, CHEM 331 and CHEM 332.

**CHEM 568 FORENSIC CHEMISTRY (3)** An introduction to chemical and physical analyses used by a modern crime laboratory in the evaluation of physical evidence encountered in criminal acts. Areas of concentration will include drug analysis toxicology, forensic serology, explosives analysis, arson examination, firearms and tool marks and trace evidence. Emphasis will be placed on the value of such examinations as presented by the expert witness in criminal trial. Three lecture hours. Prerequisites: CHEM 101, CHEM 102, CHEM 210 or CHEM 213/215, CHEM 330 or CHEM 332.

**CHEM 570 ORGANOMETALLIC CHEMISTRY (3)** A survey of the chemistry of compounds containing carbon-metal bonds. Synthesis, reactions and structures of compounds such as metal alkyls, carbonyls, pi-complexes, and the uses of these compounds in synthesis will be considered. Three lecture hours. Prerequisites: CHEM 331, CHEM 332; CHEM 423 recommended.

**CHEM 572 SPECTROMETRIC METHODS IN CHEMISTRY (4)** This course deals with the theory and application of three of the major instruments used in chemistry today: nuclear magnetic resonance spectroscopy, infrared spectroscopy, and mass spectrometry. Emphasis will be on the practical use of the instruments in pure and applied chemical investigations involving students in the actual operation of the instruments. Two lecture hours and four laboratory hours. Prerequisites: CHEM 332 and consent of instructor.

**CHEM 584 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS I (3)** A survey of principles and applications of chemistry for secondary school teachers. Lecture: chemical reactions, stoichiometry, atomic structure and theories of chemical bonding. Laboratory: an examination of experiments suitable for the secondary school curriculum with emphasis upon laboratory safety. Two lecture hours and two hours of laboratory-discussion. Prerequisites: High school algebra, experience as secondary school teacher, and consent of instructor.

**CHEM 585 MODERN CHEMISTRY FOR TEACHING: PRINCIPLES AND APPLICATIONS II (3)** A survey of principles and applications of chemistry for secondary school teachers. Lecture: properties of solutions, acid/base theories, reaction kinetics, chemical equilibrium, thermodynamics, state of matter, and nuclear chemistry. Laboratory: an examination of experiments suitable for the secondary school curriculum with emphasis upon laboratory safety. Two lecture hours and two hours of laboratory-discussion. Prerequisites: CHEM 383 or CHEM 584 and consent of instructor.

**CHEM 586 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS III (3)** Experimental chemistry for secondary school teachers: principles of laboratory measurements, design of experiments, obtaining and interpreting experimental data, laboratory techniques and instrumentation. Two lecture hours and two hours of laboratory-discussion. Prerequisites: CHEM 384 or 585 and consent of instructor.

**CHEM 587 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS IV (3)** A survey of principles and applications of physical chemistry for secondary school teachers. Chemical thermodynamics, descriptions of solutions, kinetic theory of gases, reaction rates and mechanisms, and introduction to quantum mechanics. Three lecture hours. Prerequisites: CHEM 385 or CHEM 586 and consent of instructor.

**CHEM 588 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS V (3)**

Organic chemistry for secondary school teachers. Functional groups, reaction mechanisms, natural products. Simple and complex techniques of purification, analysis, and synthesis. Three lecture hours and one hour of laboratory. Prerequisites: CHEM 386 or CHEM 587 and consent of instructor.

**CHEM 589 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS VI (3)**

Principles and applications of biochemistry for secondary school teachers. Structures and functions of biological molecules, enzymes, metabolic energies, and nucleic acids. Three lecture hours. Prerequisites: CHEM 387 or CHEM 588 and consent of instructor.

**CHEM 590 MODERN CHEMISTRY FOR TEACHERS: PRINCIPLES AND APPLICATIONS VII (3)**

Modern instrumental methods for secondary school teachers. In integrated laboratory-lecture course discussing four major instrumental methods and their uses in solving typical chemical problems: spectrophotometry, nuclear magnetic resonance spectroscopy, mass spectrometry, and chromatography. Two lecture hours and two hours of laboratory-discussion; short field trips may be required. Prerequisites: CHEM 388 or CHEM 589 and consent of instructor.

**CHEM 641 PHYSICAL CHEMISTRY: PRINCIPLES AND APPLICATIONS**

**(4)** Chemical theory, experimental methods, and solutions and phases, reaction kinetics, applications of quantum mechanics, and instrumental techniques. Prerequisites: CHEM 102, MATH 115 or MATH 119, and PHYS 203 or PHYS 211 or PHYS 221; or Secondary school teaching experience. MATH 273 is strongly recommended.

**COMMUNICATION STUDIES (COMM)**

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**COMM 518 COMMUNICATION TRAINING AND DEVELOPMENT (3)**

Instructional strategies for implementing objectives, specifying and evaluating results. Prerequisites: COMM 115 and COMM 216 or COMM 331.

**COMM 519 ORGANIZATION COMMUNICATION (3)**

Superior-subordinate communication, message dissemination, information overload, trust levels, and work group interaction. Prerequisites: COMM 131.

**COMM 520 COMMUNICATION IN THE LEGAL PROCESS (3)**

Focus on communication questions and skills by lawyers, judges, litigants, and jurors in criminal and civil justice. Survey of research related to verbal and nonverbal aspects of communication as they apply to the legal concerns of interview, negotiation, and litigation. Prerequisite: Consent of instructor.

**COMM 522 CONFERENCE AND MEETING MANAGEMENT (3)**

Communicative details in preparing for and conducting events. Prerequisite: COMM 419.

**COMM 525 EVIDENCE AND CREDIBILITY (3)**

Evaluating major sources of public intelligence, including the press, government, and academicians. Prerequisite: Consent of instructor.

**COMM 601 THEORIES AND RESEARCH IN INTERCULTURAL COMMUNICATION (3)**

Analysis of cross-cultural interaction among people in multicultural societies or multicultural organizations. Prerequisite: COMM 379 or MCOM 633.

**COMM 695 INDEPENDENT STUDY IN COMMUNICATION STUDIES (1-6)**

Independent study in selected areas of communication through directed readings, projects, papers, or seminars. May be repeated for a maximum of six credits. Prerequisite: 15 credits of graduate level COMM and/or MCOM courses and consent of instructor.

## COMPUTER SCIENCE (COSC)

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**COSC 519 OPERATING SYSTEMS PRINCIPLES (3)** An overview of the principles of operating systems. Topics include multiple processes, process synchronization and intercommunication, resource allocation, memory management, processor scheduling, and I/O device management. Prerequisite: COSC 336.

**COSC 553 COMPILER DESIGN (3)** Principles, techniques, algorithms and structures involved in the design and construction of compilers. Topics include lexical analysis, formal grammars, syntactic and semantic analysis, error recovery, code generation and optimization. Prerequisites: COSC 336.

**COSC 571 COMPUTER PERFORMANCE EVALUATION (3)** Computer system performance evaluation methodologies, techniques and tools including different types of monitors as a measurement tool, work-load characterization, important performance indices, analytic modeling with particular emphasis on the application of the operational queuing network modeling techniques to performance analysis, and technical aspects of computer selection. Prerequisites: MATH 274 and Pre- or Co-requisite: COSC 439/519.

**COSC 578 DATABASE MANAGEMENT SYSTEMS (3)** Data models and sublanguages. Security and integrity problems. The functions of the database administrator. The implementation and use of a database management system. A comparison of widely used DBMS packages. Prerequisite: COSC 336.

**COSC 581 ARTIFICIAL INTELLIGENCE (3)** A survey of the problems and techniques involved in producing or modeling intelligence in computers. Particular emphasis will be placed on representation of knowledge and basic paradigms of problem solving. Topics include game playing, theorem proving, natural language and learning systems. Prerequisite: COSC 336.

**COSC 583 DESIGN AND ANALYSIS OF ALGORITHMS (3)** Algorithm design such as heuristics, backtrack programming, branch and bound, recursion, simulation, and conquer, balancing and dynamic programming. Efficiency of algorithms-NP-complete problems. Prerequisite: COSC 336.

**COSC 586 COMPUTER GRAPHICS (3)** An introduction to the field of computer generated and/or displayed graphics data. Covers the topics of representation, transformations, 3-D problems, graphics hardware, and programming considerations. Prerequisite: COSC 336.

**COSC 600 ADVANCED FILE AND DATA ORGANIZATIONS (3)** Data abstraction, linear data structures, file organization and access methods, memory management, advanced internal and external sort and search algorithms, and the trade-offs involved in the use of different data organization. Prerequisite: Computer Science graduate standing.

**COSC 605 HUMAN FACTORS & HUMAN-COMPUTER INTERACTION (3)** Design of information systems interfaces. Discussion of how information systems components and work environments can be constructed to make people more effective, productive, and satisfied with their work life. Output and input design, arrangement of displays and controls, case studies in human factors. Prerequisite: TU Graduate standing or consent of instructor.

**COSC 611 COMPUTER SIMULATION (3)** Continuous and discrete event systems simulation application, implementation, role of modeling and languages, experimental design, data collection, verification, validation, object-oriented simulation, random variable generation, Monte Carlo methods for performance evaluation, sensitivity analysis and optimization. Prerequisite: COSC 600 or equivalent.

**COSC 612 SOFTWARE ENGINEERING I (3)** Formal software engineering principles and practices and their application to the de-

velopment of computer based systems. Prerequisite: COSC 600.

### **COSC 614 SOFTWARE ENGINEERING**

**II (3)** Formal process leading to requirements, design and test specifications, quantitative measures of useful software parameters, review of software systems components and complete design and test process. Prerequisite: COSC 612.

### **COSC 615 COMPILER DESIGN II (3)**

Project-oriented course applying the theory to design a full compiler for a subset of a high-level language. Parsing techniques, symbol table handling, intermediate code generation, run-time memory management, error handling and code optimization techniques. Prerequisites: COSC 600 and COSC 415 or equivalent.

### **COSC 638 ADVANCED COMPUTER ARCHITECTURES (3)**

Memory system design: framework of memory hierarchies, cache memory, and virtual memory. Pipeline structures: pipelined data path, pipelined control, pipeline/vector computer system architectures. RISC architectures. Parallel architectures: SIMD and MIMD system design and performance evaluation, multiprocessor system with interconnection networks. Prerequisites: COSC 302 or 338.

### **COSC 639 OPERATING SYSTEMS II**

**(3)** Implementation of operating systems for on-line multi-programming environment. Primary and secondary storage management techniques, file security, data integrity and a detailed study of operating systems such as UNIX. Prerequisite: COSC 439/519 or equivalent.

### **COSC 650 DATA COMMUNICATIONS AND COMPUTER NETWORKS (3)**

Data communications concepts and design. Network layers, protocols, security, privacy, design and performance. LAN and public networks. Prerequisite: COSC 600.

### **COSC 655 ADVANCED TOPICS IN PROGRAMMING LANGUAGES (3)**

Concepts and structures in design and imple-

mentation of widely used programming languages. Characteristics of different forms of programming languages such as functional, object-oriented, concurrent and logic programming. Prerequisite: COSC 600.

### **COSC 657 DATABASE MANAGEMENT SYSTEMS II (3)**

Relational database systems application, implementation, management, administration, design, advanced data modeling, object-oriented databases, deductive databases, query optimization, functional dependencies, concurrency, security and integrity. Prerequisite: COSC 457/578 or equivalent.

### **COSC 661 ARTIFICIAL INTELLIGENCE PROGRAMMING AND ADAPTIVE SYSTEMS (3)**

Major differences between AI and conventional programming, symbolic programming techniques and adaptive systems, PROLOG and LISP. Prerequisite: COSC 461 (581).

### **COSC 665 EXPERT SYSTEM DESIGN AND DEVELOPMENT (3)**

Approaches and methods employed in expert system design and development analysis of selected expert systems, prototyping and presentation. Prerequisite: COSC 461/581 or equivalent.

### **COSC 670-679 SPECIAL TOPICS IN COMPUTER SCIENCE (3)**

Reading and study in selected topics in the field of computer science. Emphasis is on an increased knowledge of computer science. A project or paper is required. Prerequisites: COSC 600 or equivalent and consent of instructor.

### **COSC 680 SEMINAR IN COMPUTER SCIENCE (1)**

Presentation and discussion of research trends and advanced topics in computer science. Students may enroll in this course up to three times for a total of 3 credit hours. Prerequisite: Consent of instructor.

### **COSC 682 ADVANCED TOPICS IN AI: MACHINE LEARNING (3)**

Learning approaches, methods, and designs, selected learning systems and survey of current literature. Prerequisites: COSC 661.

**COSC 695 INDEPENDENT STUDY IN COMPUTER SCIENCE (3)** Independent study in selected areas of Computer Science. Prerequisites: Nine hours at the graduate or upper division level.

**COSC 715 ROBOTICS (3)** Physical mechanisms of robotics, issues of modeling, planning control, and programming. Principles underlying the design and analysis of robotic systems. Prerequisites: COSC 600 or equivalent.

**COSC 716 OBJECT-ORIENTED METHODOLOGY (3)** Object-oriented approach to modeling, problem solving, requirement analysis, system design, system implementation, database design, system engineering and software engineering. Prerequisite: COSC 600 or equivalent.

**COSC 720 COMPUTATIONAL COMPLEXITY (3)** Computational complexity, time and storage cost of polynomial. Non-polynomial (NP) and NP-complete problems, randomize computation, cryptography and approximability. Prerequisite: COSC 483/583.

**COSC 725 PROCESS CONTROL AND REAL-TIME SYSTEMS (3)** Analog to digital and digital to analog conversions, signal conditioning and processing, direct digital control of processes, adaptive control of non-linear systems, real-time programming considerations - response time, survival time, recovery time, and throughput, executive system calls, memory related system calls, task-synchronization system calls, multiprocessing, interrupts, task scheduling and task concurrency. Prerequisite: Graduate Standing or a course in computer architecture.

**COSC 730 NETWORK MANAGEMENT SYSTEMS (3)** Various network management, configuration, architectures, protocols, design complexities, their software implementation and network system's pivotal role in the global information superhighway applications. Prerequisites: COSC 650 or equivalent.

**COSC 740 PARALLEL COMPUTING (3)** Parallel computing and its applications including parallel computer models, parallel matrix algorithms, optimization algorithms, complexity of parallel algorithms, parallel programming environment, application of parallel algorithms in sorting, searching, matrix operations, system of linear equations and optimization. Prerequisite: COSC 600 or equivalent and a course in linear algebra.

**COSC 750 NEURAL NETWORKS (3)** Discussion of neural networks, architectures, algorithms and applications, including Hebbian, Hoffield, competitive learning. ART and Back propagation neural nets. Prerequisite: COSC 600 or equivalent.

**COSC 897 GRADUATE PROJECT IN COMPUTER SCIENCE (3)** Individual preparation and presentation oriented toward application of theories and techniques in computer science. Prerequisites: Completion of at least 21 graduate credit hours toward the M.S. degree in computer science.

**COSC 898 GRADUATE THESIS (6)** An original investigation using an acceptable research method and design. Prerequisites: Completion of at least 21 graduate credit hours toward the M.S. degree in computer science.

## **DANCE (DANC)** \_\_\_\_\_

**DANC 551 TEACHING DANCE IN GRADES K-12 (3)** A teacher directed approach to the exploration of methods and materials available for the teaching of multiple dance forms. Prerequisites: DANC 251 and 4 or more credits in dance technique classes or consent of the instructor.

## **EARLY CHILDHOOD EDUCATION (ECED)** \_\_\_\_\_

**ECED 503 THE CURRICULUM IN PRIMARY EDUCATION (3)** The child, curriculum, content, methods and materials of

teaching, and program organization in the primary school years. Evenings and summers only. Prerequisite: For uncertified teachers only. Six hours of ECED. Not open to graduates of ECE programs.

**ECED 507 INTERACTIVE TECHNOLOGY AND YOUNG CHILDREN (3)** Emerging issues on interactive technology and early childhood education. Availability and use of interactive technology in schools. Prerequisites: ISTC 201.

**ECED 511 PARENTS AND TEACHERS: PARTNERS IN EARLY CHILDHOOD EDUCATION (3)** The development of a rationale for improved parent-teacher relationships in ECED programs. The role of paraprofessionals, specialists, and volunteers. Observation, participation, home and school visits by teachers and parents functioning as a team. Prerequisite: Six hours of Early Childhood Education or approval of Early Childhood Education department.

**ECED 515 THE DAY CARE CENTER (3)** An interdisciplinary course designed to prepare day care personnel. Resource persons from related agencies will participate. Topics include purposes of day care, problems of organization, administration and supervision, records programs, community interaction, and parent relations. Field trips and observation of day care centers. Prerequisite: Six hours of ECED or approval of Early Childhood Education department.

**ECED 517 EARLY IDENTIFICATION OF LEARNING DISABILITIES (3)** Survey of the nature of learning disabilities in the young child; emphasis on early identification, theoretical approaches, major disability categories; survey of remedial principles. Prerequisites: 6 hours of PSYC and 6 hours of ECED or approval of Early Childhood Education department.

**ECED 521 PROBLEMS IN EARLY CHILDHOOD EDUCATION (3)** Research findings used as a basis for program planning in nursery school, kindergarten and primary grades; current trends and issues are con-

sidered. Prerequisite: student teaching and/or teaching experience in preschool or primary grades; junior standing; or approval of Early Childhood Education department.

**ECED 523 LABORATORY EXPERIENCES IN EARLY CHILDHOOD EDUCATION (3)** Class-room experiences with children in preschool and primary grades in a variety of teaching-learning situations. Analysis of observations in light of current research. Concurrent with ECED 421. Summers only. Prerequisite: junior standing and approval of Early Childhood Education department.

**ECED 570-579 SPECIAL TOPICS IN EARLY CHILDHOOD EDUCATION: (Topic to be named) (1-3)** In-depth study of a selected topic in Early Childhood Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Graduate credit only with approval of the graduate program director. Each topic may be taken as a separate course; repeatable for different topics.

**ECED 594 TRAVEL AND STUDY: EARLY CHILDHOOD EDUCATION (1-6)** A field study, including cultural tours in selected foreign countries, of current Early Childhood Education programs, facilities, and trends. Lectures, observations, and personal interactions. Required participation in planned educational activities and a follow-up paper. Prerequisites: junior, senior, graduate standing, or consent of the department chair. Consent of graduate program director required for graduate degree credit. May be repeated for a maximum of 6 credits.

**ECED 609 GROWTH AND DEVELOPMENT OF YOUNG CHILDREN (3)** Methods of studying behavior; implications for programs and curriculum development.

**ECED 613 PROGRAMS FOR INFANTS AND CHILDREN (3)** Review, research and evaluation of programs for young children. Prerequisite: ECED 609.

**ECED 615 ADMINISTRATION AND SUPERVISION OF PROGRAMS FOR YOUNG CHILDREN (3)** Theory and practice of operating programs for young children; staff selection; evaluation; training; curriculum development; financing; and budgeting. Prerequisites: 6 credits ECED.

**ECED 617 ADVANCED LEARNING DISABILITIES (3)** Research; theories; etiology; identification and remediation; emphasis on neuropsychology of learning. Prerequisites: 6 credits in psychology and 6 credits graduate level ECED.

**ECED 619 MEASUREMENT AND EVALUATION IN EARLY CHILDHOOD EDUCATION (3)** Assessment instruments; research; basic statistical concepts; diagnostic and prescriptive testing. Prerequisites: 6 credits ECED; 6 credits PSYC.

**ECED 621 PREVENTION OF READING FAILURE IN EARLY CHILDHOOD (3)** Prereading and beginning reading skills in relation to stages of cognitive development and individual differences of children with emphasis on implications for teaching. Prerequisite: ECED 609.

**ECED 631 THE GIFTED AND TALENTED YOUNG CHILD (3)** Theory and research on characteristics, identification programming and curriculum adaptations for young gifted children. Prerequisite: ECED 609.

**ECED 647 THE TEACHING PROCESS: EARLY CHILDHOOD EDUCATION (3)** Systems of analyzing teaching behavior; models of teaching for achieving cognitive, social, and personal learning objectives; and analysis of classroom application of teaching models. Prerequisite: teaching experience (students enrolling for this class should be teaching).

**ECED 653 PERCEPTUAL AND COGNITIVE DEVELOPMENT OF YOUNG CHILDREN (3)** Piaget's theory and related research on stages of intellectual development

with emphasis on implications for selecting materials, activities, and teaching strategies in preschool and primary grades. Prerequisite: PSYC 611 or ECED 609.

**ECED 665 CURRICULUM DEVELOPMENT IN EARLY CHILDHOOD EDUCATION (3)** Curriculum development in early childhood education; history, theories, research, and contemporary influences; objectives, content, and evaluation; teachers as curriculum developers and implementors. Prerequisites: Certification and teaching experience or consent of instructor.

**ECED 670-672 SPECIAL TOPICS IN EARLY CHILDHOOD EDUCATION (1-3)** Studies in selected content areas. Prerequisites vary according to topic area. Prerequisite: Consent of graduate program director.

**ECED 695 INDEPENDENT STUDY IN EDUCATION: EARLY CHILDHOOD (3)** Independent study in selected areas of Early Childhood Education. Prerequisites: Early Childhood Education graduate standing and consent of Early Childhood Education graduate program director.

**ECED 696 DIRECTED READINGS IN EARLY CHILDHOOD EDUCATION (3)** Independent readings in selected areas of Early Childhood Education. Prerequisites: graduate standing and consent of Early Childhood Education graduate program director.

**ECED 773 SEMINAR IN EARLY CHILDHOOD EDUCATION (3)** Current trends, issues, problems in early childhood education. Quantitative/qualitative investigation of selected aspects of early childhood. Prerequisites: 27 hours of graduate work in ECED including EDUC 7612.

**ECED 898 MASTER'S THESIS IN EARLY CHILDHOOD EDUCATION (6)**

**ECED 899 THESIS CONTINUUM (1)**

**ECONOMICS (ECON)** —————

**ECON 541 LABOR ECONOMICS AND LABOR RELATIONS (3)** The determination of wages. Labor unions: history, structure, activities, effects. Government labor policy. Prerequisites: ECON 201 and ECON 202.

**ECON 585 SEMINAR ON ECONOMIC ISSUES (3)** Research and writing of papers on an economic issue selected by the instructor. Prerequisites: ECON 309, ECON 313, ECON 310.

**ECON 593 WORKSHOP ON ECONOMIC EDUCATION (3)** Designed to help teachers and school administrators gain a better understanding of the economic working of the society in which we live. Prerequisite: Consent of the instructor.

**ECON 690 INDEPENDENT STUDY (1-3)** Individual and supervised study in selected areas of economics. Prerequisite: Permission of instructor.

**ECON 693 ECONOMIC EDUCATION RESEARCH AND METHODS (3)** Methodology and research in contemporary economic education in the elementary and secondary schools. A contemporary issues approach to economic instruction is employed. Prerequisites: ECON 301, ECON 309, ECON 323, and ECON 335.

**ECON 695 SEMINAR IN ECONOMICS (3)** Research and writing of papers on an economics issue selected by the instructor. Prerequisites: ECON 309, ECON 323 and ECON 335.

**ECON 697 INTERNSHIP IN ECONOMICS (3)** Supervised work experience designed to provide an understanding of the economic system and the practical applications of economic principles. Prerequisite: Consent of Internship Coordinator .

**GENERAL EDUCATION (EDUC)** —————

**EDUC 502 HISTORY OF EDUCATION (3)** Major developments, personalities, and movements in the evolution of education.

**EDUC 503 COMPARATIVE EDUCATION (3)** A study of patterns of education in different cultural settings with implications for the student of American education. Emphasis on cross-cultural, political, economic and social aspects of educational. Prerequisite: EDUC 401 or equivalent or consent of instructor.

**EDUC 505 PHILOSOPHY OF EDUCATION (3)** Philosophic dimensions of the teaching learning process, as discriminated and discussed by major philosophers and education philosophers.

**EDUC 506 RECENT TRENDS IN TEACHING (3)** Recent teaching strategies, organizational patterns and curricular innovations for levels K-12 are examined. Students may pursue individualized projects. Prerequisite: Student teaching or senior standing with consent of instructor.

**EDUC 507 CONTEMPORARY ISSUES IN EDUCATION (3)** Seminar approach to current issues in education. Prerequisite: Student teaching or senior standing with consent of instructor. (No prerequisites when offered in day.)

**EDUC 509 FIELD STUDIES OF THE CHILD AND HIS COMMUNITY (2)** Planning and working with groups of children in approved social agencies or making extensive studies of recreational and non-recreational social agencies. Class discussion and field trips.

**EDUC 511 OPEN EDUCATION: PHILOSOPHY AND PRACTICE (3)** Philosophy and operation of open education schools, planning, management and evaluation. Emphasis on cognitive development. Prerequisite: Teaching experience.

**EDUC 515 EDUCATIONAL STATISTICS (3)** Designed as a practical course in statistics for the student in education. Emphasis is upon educational applications of descriptive statistics, including central tendency, variability, and association. Prerequisite: MATH 204, MATH 205 or equivalent.

**EDUC 517 CHILDREN'S LITERATURE (3)** Study of literature for children, examining print and non-print material. Attention to authors, illustrators, awards; criteria for selection and importance in curriculum. Prerequisites: 2 ENGL courses.

**EDUC 519 STORYTELLING (3)** The selection and presentation of stories for children. A study of sources for the storyteller in folklore, myth, legend, poetry, and the writings of storytellers. Development of skills in storytelling. Prerequisite: EDUC 417 or consent of instructor.

**EDUC 545 HUMAN RELATIONS AND THE INDIVIDUAL (3)** Consideration given to: understanding one's self, the nature of prejudice and environmental factors which influence minority groups and cultures, and relationship of these factors to the development of meaningful educational programs. Prerequisites: For undergraduates: student teaching, and at least one course each in sociology and psychology. For graduates: teaching experience or certification.

**EDUC 547 NEW APPROACHES TO POSITIVE LEARNING CLIMATES (3)** A study of the theories and skills of various communication and climate setting strategies through problem solving and increased insight about interpersonal relationships. Prerequisite: Teacher certification or consent of the instructor.

**EDUC 549 CITIZENSHIP EDUCATION IN THE SCHOOL (3)** The development and implementation of activities for citizenship education in the school: philosophy, concepts, principles, techniques and resources for teacher and administrator. Prereq-

uisites: EDUC 401 and ELEM 375 or equivalents, consent of instructor, teaching experience.

**EDUC 551 GUIDANCE IN THE PUBLIC SCHOOL (2-3)** Scope and function of a guidance program: the role of the classroom teacher in guidance.

**EDUC 553 SUPERVISORY PRACTICES IN TEACHER EDUCATION (3)** Experiences and study in developing particular skills and competencies for supervising quality laboratory/field experiences. Content is designed for supervising teachers, team leaders, and resource personnel. Prerequisite: Teaching experience. Graduates count this as a workshop elective.

**EDUC 555 INTRODUCTION TO CAREER DEVELOPMENT EDUCATION: THEORY AND PRACTICE (3)** Recent trends in career development school programs K-12; examining presently operating career programs; evaluating existing career materials; assessing attitudes toward work and the elements of career choice. Prerequisite: Undergraduate: six hours of psychology and senior standing; Graduate: Bachelor's degree or equivalent.

**EDUC 560 TEACHING IN A MULTI CULTURAL/MULTIETHNIC SOCIETY (3)** The course will provide teacher education students with the background knowledge, understandings, and techniques to deal effectively with children from diverse cultural and ethnic backgrounds. Prerequisite: 3 credits in Education or PSYC 201.

**EDUC 563 SEX ROLE DEVELOPMENT IN THE SCHOOLS (2 OR 3)** An examination of theories of sex role development and their impact on educational methods and curriculum. Degree candidates must obtain permission of their graduate advisor. Staffed by Education Division. Assistance of Women's Studies staff may be utilized. The course will carry three credits when scheduled for three

hours meeting per week and two credits when scheduled for two hours meeting per week. Prerequisite: 6 credits in Education.

**EDUC 567 TEAM TEACHING WORKSHOP (3)** Conducted to assist teachers who are actively engaged in team teaching or will be participating as members of a team in the future.

**EDUC 570-579 SPECIAL TOPICS IN EDUCATION: (Topic to be named) (1-3)** In-depth study of a selected topic in Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time there is a topic scheduled. Graduate credit only with approval of the graduate program director. Each topic may be taken as a separate course.

**EDUC 594 TRAVEL AND STUDY EDUCATION: (Project to be named) (1-6)** Study abroad of educational facilities, programs or practices, or selected projects in educational topics. By specific arrangement with program chair and sponsoring instructors. Consent of graduate program director required for graduate degree credit.

**EDUC 595 INDEPENDENT STUDY IN EDUCATION: (Project to be named) (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training under the direction of a staff member. Prerequisite: approval of appropriate program chair. Graduate credit by consent of graduate program director only.

**EDUC 596 DIRECTED READINGS IN EDUCATION (1-4)** Independent readings in selected areas of Education, in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the Department to major students. Prerequisite: approval of appropriate program chair. Graduate credit by consent of graduate program director only.

**EDUC 601 EDUCATIONAL IDEAS IN HISTORICAL PERSPECTIVE (3)** Current trends and issues in education as reflecting and influencing the social, economic, and political forces in our cultural heritage. Prerequisite: EDUC 401, EDUC 402, EDUC 405.

**EDUC 603 SCHOOL LAW (3)** A study of the legal framework within which the public and non-public schools function. The course will give attention to the legal relationships among federal, state, and local governments; the legal status of school districts, boards of education, and school administrator; the legal status of non-public schools; and the law regarding all facets of the school program, staff, and pupils. Prerequisite: Student teaching or teaching experience.

**EDUC 605 RESEARCH & INFORMATION TECHNOLOGY (3)** Use of database networks for information retrieval; computer hardware and software application programs appropriate for research and curriculum planning; introduction to distance learning; interactive technologies and resource-based learning. Prerequisite: Teaching experience or completion of student teaching.

**EDUC 607 HOME, SCHOOL COMMUNITY (3)** The interaction between home, school and community in educational programs; survey and evaluation of techniques for working with parents; study of various agencies contributing to the education and well-being of children and youth at home and at school. Prerequisites: A course in Sociology and approval of Department of Education.

**EDUC 611 SUPERVISION OF STUDENT TEACHING (3)** An analysis of the roles of the cooperating teacher, college supervisor, and student teacher; current practices, issues, problems, trends and evaluation in laboratory experiences, current research. Prerequisite: Teaching experience.

**EDUC 614 EDUCATIONAL TESTS AND MEASUREMENTS FOR RESEARCH (3)** Principles underlying educational test instrumentation; problems in measurement; collection and interpretation of data; research application.

**EDUC 641 TRANSACTIONAL ANALYSIS IN EDUCATION (3)** Principles and theory of Transactional Analysis, and the relations of this knowledge to education. The application of Transactional Analysis and its related theories to the education setting. Prerequisite: Teacher certification or consent of instructor.

**EDUC 645 THEORIES IN EDUCATIONAL ADMINISTRATION (3)** Theoretical bases for educational administration. Prerequisite: Teaching experience, teacher certification.

**EDUC 646 HUMAN RELATIONS AND THE PROFESSIONAL (3)** Professional behavior in organizational work place, emphasizing leadership and communication. Prerequisite: Teaching experience or certification.

**EDUC 649 AMERICAN POLITICS AND EDUCATION (3)** The American political structure and its relation to policy making and administration of public education. Topics includes educational opportunity, community responsibility and control, accountability, role of the courts, church-state relations, academic freedom. Prerequisites: EDUC 401 and POSC 103.

**EDUC 650 ANALYSIS AND MODIFICATION OF TEACHING BEHAVIOR (3)** The analysis of teaching learning situations to aid the advanced teacher education students to develop, refine and prescribe skills and strategies and field work. Prerequisites: teaching experiences, supervisory experiences, EDUC 453, and/or EDUC 611.

**EDUC 661 RESPONDING TO AND EVALUATING WRITING (3)** Direct assessment using holistic, analytic, primary trait

and t-unit analysis; indirect assessment of grammar, punctuation and usage, in-process response techniques. Prerequisites: SCED 603, SCED 605 or SCED 558 or consent of graduate program director.

**EDUC 667 WRITING AS THINKING (3)** Research on the writing-thinking connection; self-analysis of thought processes used while writing; analysis of classroom methods for teaching writing and thinking. Prerequisites: SCED 603, SCED 605, or SCED 558 or consent of instructor.

**EDUC 670-674 SPECIAL TOPICS IN EDUCATION (1-6)** In-depth study of a selected topic in Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Approval by the appropriate graduate program director is required. Each topic may be taken as a separate course. Prerequisite: Varies with each topic.

**EDUC 695 INDIVIDUALIZED STUDY (3-6)** Individually planned programs which will permit the student to engage in research and/or field experiences relative to his professional growth. Admission by application to the graduate program director only.

**EDUC 730 LEARNING PRINCIPLES FOR TEACHERS (3)** Current theories and research on the nature of teaching and learning; relationship to classroom practice. Prerequisite: Admission to the M.A.T. program.

**EDUC 731 UNDERSTANDING THE CURRICULUM K-12 (3)** Principles and practices of curriculum development and the teacher's role as a curriculum developer. Prerequisite: Admission to the M.A.T. program.

**EDUC 732 RESEARCH METHODOLOGY IN THE INFORMATION AGE (2)** Methods of conducting research using traditional research tools and modern technology. Prerequisite: Admission to the M.A.T. program.

**EDUC 733 TEACHING MODELS AND PROCESSES K-12 (3)** Systems for analyzing teaching behavior, models of teaching and analysis of classroom application. Prerequisite: Admission to M.A.T. program.

**EDUC 734 THE TEACHER AS RESEARCHER (2)** Theory and methodology for conducting classroom research; emphasis on descriptive research approaches. Prerequisite: Admission to M.A.T. program.

**EDUC 735 PROSEMINAR: PROBLEMS AND ISSUES (1-2)** Problems and issues which impact on teachers and the schooling process. Prerequisite: Admission to the M.A.T. program.

**EDUC 736 CLASSROOM MANAGEMENT (2)** Disciplinary theories; structuring classes, conflict resolution and coping with deviant behavior. Prerequisite: Admission to the M.A.T. program.

**EDUC 737 TEACHING STUDENTS WITH DISABILITIES IN THE MAINSTREAM (2)** Legal bases, and methods and materials appropriate for teaching mainstreamed handicapped students. Prerequisite: Admission to the M.A.T. program.

**EDUC 741 SEMINAR IN LIABILITY FOR PROFESSIONAL IN EDUCATION (3)** In-depth discussions of a great variety of emerging legal cases appropriate to liability among professionals in education. Emphasis will be given to such topics as: negligence, duty, abrogation of duty, foreseeability, loco parentis, sovereign immunity, Suspension and expulsion, professional negotiations, evaluations, and student rights and responsibilities. Prerequisite: One course in School Law.

**EDUC 745 SCHOOL BUDGETING AND FISCAL PLANNING (3)** Development of a budget on departmental, local school, system-wide, and state levels: implementation and evaluation of budgets; long- and short-term fiscal planning. Prerequisite: one course in administration.

**EDUC 761 RESEARCH IN EDUCATION (3)** Theory and methodology of educational research. Prerequisite: A course in statistics, or tests and measurements.

**EDUC 762 INTRODUCTION TO EDUCATIONAL EVALUATION (3)** Theory and methodology of education evaluation for systematic appraisal of process, program, staff or institution. Prerequisite: a course in statistics, or tests and measurements.

**EDUC 770-774 SPECIAL TOPICS IN EDUCATION (1-3)** In-depth study of a selected topic in Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Approval by the appropriate graduate program director is required. Each topic may be taken as a separate course.

**EDUC 797 INTERNSHIP IN EDUCATION (1-6)** An opportunity to relate theory and practice through experience in such settings as educational institutions and clinics. Plans will be formulated in advance with the graduate program director and approved by the Dean of Graduate School. Prerequisite: Consent of graduate program director, who may require other prerequisites.

**EDUC 798 GRADUATE PRACTICUM IN EDUCATION (5 OR 10)** Supervised teaching experiences at the appropriate school level for students in the MAT program. Peace Corps students only take two separate blocks of five credits each. All others register for ten credits. Prerequisites: Approval of ECED, ELED or SCED departments and the graduate program director.

**EDUC 898 MASTER OF EDUCATION THESIS (6)** Investigation of selected topic in education.

**EDUC 899 THESIS CONTINUUM (1)**

## ELEMENTARY EDUCATION (ELED)

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**ELED 511 STAFF DEVELOPMENT AND LEADERSHIP IN THE ELEMENTARY SCHOOL. (3)** An introductory course in elementary school staff development and administration with emphasis upon interpersonal and staff relationships, learning strategies and settings, curriculum developments and school-community concerns. A course designed for classroom teachers; curriculum writers; and specialists; senior, helping or resource teachers; teacher advisors; team leaders; grade or department chairpersons; and others in leadership roles. Prerequisites: A teaching certificate and/or teaching experience.

**ELED 529 PRINCIPLES AND METHODS OF READING INSTRUCTION (3)** Principles and methods underlying reading instruction, including the evaluation and prevention of reading difficulties. Prerequisite: ELED 323.

**ELED 541 CURRICULUM DEVELOPMENT IN THE ELEMENTARY SCHOOL (3)** The child and his curriculum. The teacher's role in curriculum as a process. Principles and philosophies of curriculum development. Objectives, practices, materials, and evaluation trends. Prerequisite: ELED 379.

**ELED 557 ENGLISH FOR THE NON-ENGLISH SPEAKING CHILD (3)** Methods of teaching English to elementary school children whose native tongue is another language. Prerequisite: Elementary language arts methods course or elementary teaching experiences or consent of instructor.

**ELED 558 PRACTICUM: ENGLISH FOR THE NON-ENGLISH SPEAKING CHILD (1-4)** Supervised practical experience in teaching English to elementary school children whose native tongue is another language. Prerequisite: ELED 457 and student teaching or teaching experience. May be repeated for a maximum of 4 credits.

**ELED 570-579 SPECIAL TOPICS IN ELEMENTARY EDUCATION: (Topic to be named) (1-3)** In-depth study of a selected topic in Elementary Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Graduate credit only with approval of the graduate program director. Each topic may be taken as a separate course. May be repeated under separate topics.

**ELED 594 TRAVEL AND STUDY: ELEMENTARY EDUCATION (1-6)** Study abroad for educational facilities, programs or practices, or selected projects in Elementary Education topics. By special arrangement with program chairperson and sponsoring instructors. Consent of graduate program director required for graduate degree credit. May be repeated for a maximum of 6 credits.

**ELED 595 INDEPENDENT STUDY IN EDUCATION: ELEMENTARY (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training under the direction of a staff member. Prerequisite: Approval of appropriate program chair. May be repeated for a maximum of 4 credits.

**ELED 596 DIRECTED READING: ELEMENTARY EDUCATION (1-4)** Independent reading in selected areas of Elementary Education in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the Department to major students. Prerequisite: Approval of appropriate program chair. May be repeated for a maximum of 4 credits.

**ELED 601 DEVELOPING CRITICAL, CREATIVE AND PROBLEM-SOLVING THINKING (3)** Applied theory and research about thinking and brain function. Class participation in strategies involving modes of thought which can be utilized with elementary and middle school students. Prerequisite: Teaching experience.

**ELED 611 READING AND OTHER LANGUAGE ARTS IN THE ELEMENTARY SCHOOL - ADVANCED (3)** Application of theory and research to the teaching of reading and the other language arts. Prerequisites: ELED 321, ELED 323 or ELED 462.

**ELED 613 PSYCHOLINGUISTICS AND READING COMPREHENSION (3)** Investigation of psycholinguistic research. Implementing research findings in the classroom to develop reading comprehension and thinking strategies. Prerequisite: One course in reading instruction.

**ELED 621 DIAGNOSIS AND PRESCRIPTION FOR LEARNING DIFFICULTIES (3)** Learning difficulties in the elementary and middle school; diagnosing and remediating learning difficulties. Prerequisites: Student teaching and/or classroom teaching experience and 6 credits in psychology.

**ELED 623 DIAGNOSIS AND PRESCRIPTION FOR LEARNING DIFFICULTIES - ADVANCED (3)** Diagnostic teaching, team conferencing identification of learning problems and learning styles, and effects of mainstreaming. Teaching strategies to improve auditory, visual, and verbal skills, cognitive skills related to arithmetic and reading comprehension, and classroom behavior. Prerequisite: EDUC 629 or EDUC 621 or permission of the instructor.

**ELED 631 EDUCATING THE GIFTED (3)** Identification of gifted student in elementary and middle schools; curricular adaptations and school programs; stimulating creativity and problem solving strategies. Prerequisite: Student teaching or teaching experience or consent of instructor.

**ELED 633 READING AND LANGUAGE ARTS FOR GIFTED STUDENTS (3)** Teaching reading and language arts to gifted students, diagnosing levels and needs, evaluating programs, preparing an integrative unit, assessing techniques for teaching high-level

comprehension and study skills, and locating resources. Prerequisite: one course in Children's Literature or Young Adult Literature or Reading and Language Arts, Advance or Educating the Gifted or permission of instructor.

**ELED 640 DISCIPLINE AND MANAGEMENT IN THE ELEMENTARY SCHOOL (3)** Classroom discipline in the elementary school and development of ways and means of implementing appropriate classroom management techniques. Prerequisite: Student teaching, teaching experience, or consent of instructor.

**ELED 643 VALUES REALIZATION: STRATEGIES FOR TEACHERS, PARENTS AND COUNSELORS (3)** Students acquire skills through self-analysis. Examination of life styles and values systems and develop an understanding and acceptance of cultures that are different from their own.

**ELED 647 THE TEACHING PROCESS: ELEMENTARY EDUCATION (3)** Systems for analyzing teaching behavior, models of teaching for achieving cognitive, social, and personal learning objectives; and analysis of classroom application of teaching models. Prerequisite: Teaching experience (students enrolling for this class should be teaching).

**ELED 648 INDIVIDUALIZING LEARNING IN THE ELEMENTARY SCHOOL (3)** Individualizing learning and restructuring of organizational patterns, with emphasis on learning centers, listening stations, task folders, and media centers, and computer applications. Prerequisites certification and teaching experience, or consent of instructor.

**ELED 661 HUMANIZING THE CURRICULUM (3)** The philosophy, theories, and techniques in humanistic education; development and use of methods, materials and curricula for humanistic teaching. Prerequisite: student teaching, teaching experience or consent of the instructor.

**ELED 665 THEORY AND PRACTICE OF CURRICULUM DEVELOPMENT IN THE ELEMENTARY SCHOOL (3)**

History of curriculum development in the elementary school: basic considerations affecting curriculum development; patterns of organization; objectives; practices and evaluation; problems in curriculum development. Prerequisites: Certification and teaching experience or consent of instructor.

**ELED 670-674 SPECIAL TOPICS IN ELEMENTARY EDUCATION (1-3)**

Study of a topic in elementary education. Requirements and prerequisites vary with each topic.

**ELED 685 SEMINAR IN ELEMENTARY SCHOOL SOCIAL STUDIES (3)**

Trends, content, issues, and materials involved in the teaching of social studies. Students explore one aspect of the subject and present findings.

**ELED 695 INDEPENDENT STUDY IN EDUCATION: ELEMENTARY (1-4)**

Research problems or study projects relevant to student interest and training. Prerequisite: consent of the graduate program director prior to registration.

**ELED 716 THE ADMINISTRATION OF THE ELEMENTARY SCHOOL (3)**

Principles of elementary school administration, the administrator's role and responsibilities, human relations and personnel management, public relations, management of the school unit and curriculum. Prerequisites: 3 years' teaching experience, teacher certification and 9 graduate level credits.

**ELED 770-774 SPECIAL TOPICS IN ELEMENTARY EDUCATION (1-3)**

Study of a selected topic in education. Requirements and prerequisites vary according to topic. Prerequisite: consent of Graduate program director.

**ELED 775 SEMINAR IN ELEMENTARY EDUCATION (3)**

Trends, issues, problems in elementary education. Quantitative/qualitative investigation of selected aspects of elementary education. Prerequisite: 27 hours of graduate work including EDUC 761.

**ELED 781 SEMINAR IN ELEMENTARY SUPERVISION (3)**

Role of the supervisor; supervisory practices and techniques. Prerequisite: 9 graduate credits.

**ELED 797 INTERNSHIP IN ELEMENTARY EDUCATION (1-6)**

Experience relating theory and practice in schools and clinics. Prerequisite: Twelve graduate credits.

**ELED 898 MASTER'S THESIS IN ELEMENTARY EDUCATION (6)****ELED 899 THESIS CONTINUUM (1)****ENGLISH (ENGL)** 

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**ENGL 501 HISTORICAL LINGUISTICS (3)**

An introduction to language typology and Indo-European Philology; historical development of linguistics up to the twentieth century. Prerequisites: Two ENGL courses. (Not open to student who have completed ENGL 325.)

**ENGL 502 STRUCTURAL LINGUISTICS (3)**

A study of the developments in linguistic theory in the twentieth century; major figures, De Saussure, Sapir, Bloomfield, Trubetzkoy, Chomsky. Prerequisites: Two ENGL courses (Not open to students who have completed ENGL 327.)

**ENGL 503 HISTORY OF AMERICAN ENGLISH (3)**

Origins and history of American dialects; development of elements of vocabulary, sounds, and grammar which distinguish American English; standards of American English. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 329.)

**ENGL 511 MEDIEVAL BRITISH LITERATURE (3)**

Emphasis on the mystical writers, Piers Plowman, the Gawain-poet and Arthurian literature. Prerequisite: Two ENGL courses. (Not open to students who have completed ENGL 340.)

**ENGL 512 BRITISH MEDIEVAL AND RENAISSANCE DRAMA (3)** Development of the drama, excluding Shakespeare, with emphasis on plays by Marlowe, Kyd, Jonson, Ford, and Webster. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 319.)

**ENGL 514 BRITISH LITERATURE OF THE LATER RENAISSANCE (3)** Major intellectual and literary currents of 1600-1660 in the poetry of Donne, Herbert, Marvell, Jonson, and Milton, and the prose of Bacon, Brownie, Burton, and Hobbes. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 303.)

**ENGL 515 EIGHTEENTH-CENTURY BRITISH LITERATURE (3)** Social and intellectual backgrounds, literary trends, and significant authors, such as Swift, Pope, Fielding, Johnson, and Boswell, with emphasis on satire. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 345.)

**ENGL 516 LITERATURE OF THE BRITISH ROMANTIC PERIOD (3)** Major writers such as Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats from 1790 to 1830 with emphasis on the Philosophic and social backgrounds. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 335.)

**ENGL 517 AMERICAN DRAMA (3)** American drama from the Colonial Period to the present, with emphasis on twentieth-century plays by O'Neill, Williams, Miller, Bullins, and Wilder. Prerequisites: Two ENGL courses (Not open to students who have completed ENGL 309.)

**ENGL 518 HISTORY AND LITERATURE OF THE OLD TESTAMENT (3)** The chief books of the Old Testament and the Apocrypha studied from a literary and historical point of view. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 328.)

**ENGL 519 FOLKLORE AND LITERATURE (3)** How and why literary artists draw plots, characters, themes, and style from ancient folk tradition: the anonymous oral narratives, songs, jests, and proverbs that circulate in all cultures. Focus on universal folkloric material in such works as the Bible, Aesop's Fables, the Arabian Nights, Peer Gynt, and Harvest Home. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 347.)

**ENGL 520 DEVELOPMENT OF THE BRITISH NOVEL: EIGHTEENTH CENTURY (3)** Georgian fiction and its social background, especially works by Defoe, Richardson, Fielding, Smollett, Steme, and Austen. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 423.)

**ENGL 521 DEVELOPMENT OF THE BRITISH NOVEL: NINETEENTH CENTURY (3)** Mainly Victorian fiction and its social background, especially works by Scott, the Brontes, Thackeray, Dickens, Eliot, and Hardy. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 423.)

**ENGL 522 DEVELOPMENT OF THE BRITISH NOVEL: TWENTIETH CENTURY (3)** Modern fiction and its social background, especially works by Joyce, Lawrence, Woolf, Forster, Waugh, and Greene. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 419.)

**ENGL 523 MODERN BRITISH POETRY (3)** Emphasis on Hopkins, Hardy, Yeats, Auden, Spender, Sitwell, Thomas, and Larkin. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 420.)

**ENGL 525 CHAUCER (3)** Major poems, especially The Canterbury Tales and Troilus and Criseyde. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 410.)

**ENGL 527 SHAKESPEAREAN COMEDY (3)** Shakespeare's development as a poet and dramatist in the comedies and romances. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 415.)

**ENGL 528 SHAKESPEAREAN TRAGEDY (3)** Shakespeare's development as a poet and dramatist in the histories and tragedies. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 415.)

**ENGL 529 MILTON AND THE HUMANIST TRADITION (3)** Major poetry and prose with emphasis on Milton's place in the humanist tradition. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 429.)

**ENGL 531 LITERATURE OF THE AMERICAN ROMANTIC PERIOD (3)** Social and political backgrounds, 1819-1860, important literary ideas, criticism, and major authors, such as Irving, Cooper, Emerson, Thoreau, Hawthorne, Melville, and Poe. Prerequisites: Two ENGL courses (Not open to students who have completed ENGL 427.)

**ENGL 532 LITERATURE OF THE AMERICAN REALISTIC PERIOD (3)** Major writers, such as Dickinson, Twain, Crane, and James; important secondary writers; social and political backgrounds; important literary ideas and criticism, 1860-1914. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 428.)

**ENGL 533 AMERICAN SHORT STORY (3)** Authors and schools, such as Irving, Hawthorne, Poe, Hemingway, Welty, Wright, Porter, local color writers, realists, and naturalists. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 428.)

**ENGL 535 DEVELOPMENT OF THE AMERICAN NOVEL: NINETEENTH CENTURY (3)** Major novelists, such as Cooper, Melville, Hawthorne, Twain, Howells, James and Crane. Prerequisites: Two ENGL

courses. (Not open to students who have completed ENGL 445.)

**ENGL 536 DEVELOPMENT OF THE AMERICAN NOVEL: TWENTIETH CENTURY (3)** Major novelists, such as Fitzgerald, Hemingway and Faulkner. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 446.)

**ENGL 537 AMERICAN POETRY THROUGH FROST (3)** Puritan beginnings through the early twentieth century, with emphasis on Emerson, Poe, Whitman, Dickinson, and Frost. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 447.)

**ENGL 538 MODERN AMERICAN POETRY (3)** Poetic movements from the 1920s to the 1980s, and major poets, such as Eliot, Stevens, Williams, Lowell, Plath, and Rich. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 448.)

**ENGL 541 MODERN FICTION TO WORLD WAR II (3)** Works of the modern masters of fiction, with emphasis on Proust, Mann, and Joyce. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 408.)

**ENGL 542 MODERN FICTION SINCE WORLD WAR II (3)** Works of the significant writers- English, American, and Continental - of the past thirty years, including such figures as Grass, Robbe-Grillet, Solzhenitsyn, Burgess. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 409.)

**ENGL 543 MYTH AND LITERATURE (3)** Literary reinterpretations of themes and figures from Greek and Roman mythology. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 326.)

**ENGL 544 THE CONTINENTAL NOVEL (3)** A study of major continental novels in translation. Emphasis will be upon

related and comparative elements in the novels of writers of France, Germany, Italy, and other European countries. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 323.)

**ENGL 546 MODERN DRAMA (3)** British, American, and European plays of the late nineteenth and twentieth century with attention to playwrights such as Ibsen, Strindberg, Chekov, Shaw, Pirandello, Brecht, Sartre, and Beckett. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 321.)

**ENGL 550 COMPARATIVE GRAMMAR (3)** Study of English grammar: traditional, structural, transformational. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 332.)

**ENGL 551 HISTORY OF THE ENGLISH LANGUAGE (3)** Changes and reasons for the changes in grammar, sound, and vocabulary of the language from Old English to modern times. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 430.)

**ENGL 552 STRUCTURE OF THE ENGLISH LANGUAGE (3)** A linguistic approach to sounds forms, syntax, and usage. Prerequisite: Two ENGL courses. (Not open to students who have completed ENGL 431.)

**ENGL 561 HISTORY OF LITERARY CRITICISM (3)** Major statements in literary theory from Aristotle to the present, including Horace, Sidney, Johnson, Coleridge, Eliot, and Frye. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 405.)

**ENGL 565 BRITISH AND AMERICAN PROSE (3)** Nonfictional prose, with emphasis on form and style. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 437.)

**ENGL 571 TOPICS IN WORLD LITERATURE (3)** Authors, periods, genres, or conventions. Variation in content from year to year; may be re-elected once. Prerequisites: Two ENGL courses.

**ENGL 572 TOPICS IN BRITISH LITERATURE (3)** Authors, periods, genres, or conventions. Variation in content. May be re-elected once. Prerequisites: Two ENGL courses.

**ENGL 573 TOPICS IN AMERICAN LITERATURE (3)** Authors, periods, genres, or conventions. Variation in content. Prerequisites: Two ENGL courses.

**ENGL 575 TOPICS IN LINGUISTICS (3)** Topics and issues in contemporary linguistics theory, with particular attention to recent interdisciplinary subspecialty developments: psycholinguistics, socio-linguistics, pedagogicolinguistics, etc. Topics to vary. Prerequisite: Once linguistics course or consent of the instructor. May be re-elected once. (Not open to students who have completed ENGL 476.)

**ENGL 576 TOPICS IN MULTI-ETHNIC AMERICAN LITERATURE (3)** Possible topics include women in ethnic literature, Jewish writers, the Catholic novel. Variation in content. May be re-elected once. Prerequisites: Two ENGL courses. (Not open to students who have completed ENGL 475.)

**ENGL 585-586 SEMINAR IN LITERARY STUDIES (3)** Intensive study of one area of British, American, or World literature, e.g., a specific author, period, school, or genre. Variation in content. May be re-elected. Prerequisite: Junior standing.

**ENGL 590 DIRECTED STUDIES IN ENGLISH (3)** Independent reading of a specific author, period, topic, problem, or school of literature. Topic selected by student in consultation with professor. May be repeated for a maximum of six credits only. Prerequisites: 18 hours in English, or 12 hours in English and 6 in a related discipline; minimum 3.00

average in English and the related discipline; consent of Department chair and instructor. (Not open to students who have completed ENGL 491.)

**ENGL 594 TRAVEL AND STUDY (3-6)**

Places and topics to be selected by student in consultation with instructor. Prerequisites: Two ENGL courses.

**ENGL 621 STUDIES IN ENGLISH LITERATURE (3)**

Study of one major area of English Literature (author, period, movement, etc.) Areas vary from semester to semester. Prerequisite: Graduate standing or consent of department.

**ENGL 623 STUDIES IN LITERARY CRITICISM (3)**

Study of one major area of literary criticism (author, period, movement, etc.) Areas vary from semester to semester. Prerequisite: Graduate standing or consent of department.

**ENGL 625 STUDIES IN AMERICAN LITERATURE (3)**

Study of one major area of American literature (author, period, movement, etc.) Areas vary from semester to semester. Prerequisite: Graduate standing or consent of department.

**ENGL 627 STUDIES IN WORLD LITERATURE (3)**

Study of one major area of world literature (author, period, movement, etc.) Areas vary from semester to semester. Prerequisite: Graduate standing or consent of department.

**ENGL 631 STUDIES IN LINGUISTICS**

**(3)** Topics in the technology and philosophy of language: descriptive grammar, psycholinguistics, sociolinguistics, etc. Topics vary from semester to semester. Prerequisite: Graduate standing or consent of department.

**FRENCH (FREN)**

**FREN 501 FRENCH PHONETICS (3)**

Pronunciation and analysis of spoken French based on phonological theory. Conducted in French. Prerequisite: FREN 301 or 302 or equivalent. Not open to native speakers of French.

**FREN 502 APPLIED FRENCH LINGUISTICS (3)**

Phonetics, morphology, syntax, points of interference. Linguistic study relating to methodology for French teachers. Conducted in French. Prerequisite: FREN 301-302 or equivalent.

**FREN 511 THE FRENCH NOVEL (3)**

Study of the French novel and narrative techniques from the 17th century to the present day. Conducted in French. Prerequisites: FREN 321, 322 or equivalent.

**FREN 521 FRENCH LITERATURE OF THE SEVENTEENTH CENTURY I (3)**

Selected works from France's major classical writers. Prerequisites: FREN 321, 322 or equivalent.

**FREN 525 FRENCH LITERATURE OF THE EIGHTEENTH CENTURY (3)**

Principal works of the major writers with the concurrent literary and philosophical trends. Conducted in French. Prerequisites: FREN 321, 322 or equivalent.

**FREN 531 FRENCH LITERATURE OF THE NINETEENTH CENTURY (3)**

Selected works of major writers and literary movements: Romanticism, Realism, Naturalism and Symbolism. Conducted in French. Prerequisites: FREN 321, 322 or equivalent.

**FREN 541 FRENCH LITERATURE OF THE TWENTIETH CENTURY (3)**

The evolution from fin de siècle to the present day of the novel, the theatre, and poetry as reflections of the artistic and philosophical developments leading to the modern age. Shifting emphasis from semester to semester. Conducted in French. Prerequisites: FREN 321, 322 or equivalent.

**FREN 561 FRENCH DRAMA (3)** Development of the French theatre from medieval to modern times; its literature and staging, illustrated by representative plays. Shifting emphasis from semester to semester. Conducted in French. Prerequisites: FREN 321, 322.

**FREN 570-592 DIRECTED READINGS IN FRENCH (1-3)** Discussion of a central topic with changing emphasis from year to year. Prerequisite: FREN 321-322 or equivalent.

**FREN 591-592 DIRECTED READINGS IN FRENCH (1-3)** Reserved for superior students under the guidance of a departmental advisor. Conducted in French. Prerequisite: Graduate standing.

**FREN 605 FRENCH STYLISTIQUES (3)** Practice in writing and comparison of style of various writers. Intensive and detailed textual explanation. Conducted in French. Prerequisite: Undergraduate degree in French or consent of department chairperson.

**FREN 633 SEMINAR ON FRENCH CLASSICISM (3)** The origins and underlying ideas of classicism. Conducted in French. Prerequisite: Undergraduate degree in French or consent of department chairperson.

**FREN 635 SEMINAR IN MEDIEVAL FRENCH LITERATURE (3)** Concentration on a particular topic or on one or two major authors. May be re-elected once. Prerequisite: B.A. in French or consent of Chair.

**FREN 638 SEMINAR IN EIGHTEENTH CENTURY FRENCH LITERATURE (3)** The literature of the French Enlightenment, concentrating on one or two major authors. Conducted in French. Prerequisite: Undergraduate degree in French or consent of department chairperson.

**FREN 639 THE ROMANTIC ERA IN FRANCE (3)** Sources and theories of romanticism. Work of major French romantic writers. Conducted in French. Prerequisite: Undergraduate degree in French or consent of department chairperson.

**FREN 670-679 SPECIAL TOPICS IN FRENCH LANGUAGE, LITERATURE AND CIVILIZATION (3)** Discussion of a central topic with changing emphasis from year to year. Prerequisite: Undergraduate degree in French or consent of department chairperson.

## GENERAL STUDIES (GENL) \_\_\_\_\_

**GENL 501 TOPICS IN SOCIAL SCIENCE (3)** Issues and problems to be selected by the instructor and studied from the multiple approaches of various social sciences. Prerequisite: 15 hours in the social sciences.

**GENL 511 CREATIVE METHODS OF SOLVING PROBLEMS WORKSHOP (3)** The theory and practice of creative problem solving techniques. Analysis and practical application of creative processes with attention to skills in data gathering, problem analysis, idea production, solution evaluation, and strategy development for implementation. Individual and small group work will be employed. Prerequisites: PSYC 101 or EDUC 445 or GENL 203 or consent of instructor.

**GENL 521 INTERDISCIPLINARY WORKSHOP IN ASIAN STUDIES (3)** Intensive study of a chosen region of Asia, including its physical environment, historical development, government, society, culture, and their interrelationship. An interdisciplinary team of faculty experts will participate, and the region of Asia will vary according to demand. Prerequisite: Approval of graduate program director.

**GENL 601 INTRODUCTORY SEMINAR IN LIBERAL STUDIES (3)** Introduction to research methodology. The use of scholarly resources and techniques to prepare the student for the composition of graduate level papers/projects in the Liberal Arts.

**GENL 602 CULMINATING SEMINAR IN LIBERAL STUDIES (3)** For graduate students in the Master of Arts in Liberal Studies

degree program. A seminar course which seeks primarily to integrate effectively the knowledge and skills developed by the student through the program of study. Each student will undertake an individualized research project involving an analysis of the rationale for and content of the particular program theme. Open only to students in the Master of Arts in Liberal Studies degree program. Must be taken in the last semester of degree work.

## **GEOGRAPHY AND ENVIRONMENTAL PLANNING (GEOG)**

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### **GEOG 502 ENERGY RESOURCE (3)**

Spatial patterns of traditional and alternative forms of energy will be analyzed. The many facets of the energy problem will be analyzed including physical deposits, economic variables, public policy implication, and geographical patterns. Prerequisite: 6 hours of Geography or consent of instructor.

### **GEOG 503 SOILS AND VEGETATION**

**(3)** A resource study of the world's soils and plant formations with emphasis placed upon their genesis and spatial differentiations. Prerequisites: 6 hours of Geography, CHEM 101, BIOL 101 or 105.

### **GEOG 504 INTERPRETATION OF AERIAL PHOTOGRAPHS (3)**

Reading and interpretation of aerial photographs. The application of the aerial photograph in the fields of geography, geology, and photogrammetry.

### **GEOG 505 CARTOGRAPHY AND GRAPHICS I (3)**

Study in design, construction, and effective application of maps and charts for analysis and publication; practical exercises in the use of cartographic tools, materials, and techniques.

### **GEOG 505 CARTOGRAPHY AND GRAPHICS I (3)**

Study in design, construction, and effective application of maps and charts for analysis and publication; practical exercises in the use of cartographic tools, materials, and techniques.

### **GEOG 506 CARTOGRAPHY AND GRAPHICS I (3)**

Continued exercises in map graphics and areal distribution maps. New techniques in presentation of graphic data and spatial relationships. Prerequisite: GEOG 323.

### **GEOG 507 COMPUTER MAPPING (3)**

Computer hardware and software for preparation of general-purpose and thematic maps; application of computer mapping for decision-making purposes. Laboratory projects involving student use of the computer are required. Prerequisites: Prior computer experience (MS-DOS, word processing, spreadsheets and database management systems) is strongly recommended.

### **GEOG 508 TECHNIQUES AND MATERIALS FOR GEOGRAPHY TEACHERS (3)**

A systematic review of geographic concepts in relation to interdisciplinary studies in the physical and social sciences. Examination of the content of geography and problems of presentation.

### **GEOG 509 URBAN DESIGN - MAN-SPACE-ENVIRONMENT (3)**

The physical planning process at the immediate, perceptual level. The relation of environment and behavior is explored, different urban areas are analyzed and a short design problem will be assigned. Prerequisite: GEOG 101-102 or consent of instructor.

### **GEOG 510 HISTORICAL GEOGRAPHY OF URBANIZATION (3)**

Spatial and temporal development of urbanization and urban morphology from the rise of civilization in the ancient Near East to the contemporary post industrial city. The entire scope of urban functions is surveyed, with the emphasis on the city as a man-made environment. Prerequisite: Six hours of geography or consent of instructor.

### **GEOG 511 CULTURAL GEOGRAPHY (3)**

Study of origins and diffusion of cultures and the resulting impact in creating the world's contrasting cultural landscapes. Not open to those who completed GEOG 221. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 512 ECONOMIC GEOGRAPHY**

**(3)** Designed to explain the location of economic activities through a series of principles and theories. Emphasis on the various sectors of the economy, transportation, and economic development. Not open to those who completed GEOG 231. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 513 SPATIAL ORGANIZATION OF ECONOMIC ACTIVITY (3)**

Provides and intermediate level coverage of the organization of the economy of space. Draws from basis regional economics to illustrate and explain the geographical patterns of land use, industry, service activities, and regional patterns of economic development. Prerequisite: Six hours of geography including GEOG 359.

**GEOG 514 ADVANCED PHYSICAL GEOGRAPHY (4)**

Detailed analysis of characteristics, distribution, and geographical significance of the earth's landforms. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 515 CLIMATOLOGY (3)**

Character, causes, and distribution of climatic types. Emphasis upon world pattern. Students may be required to do field work. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 516 QUANTITATIVE METHODS IN GEOGRAPHY (3)**

focus on statistical problems associated with the analysis of geographic data. Emphasis on the unique spatial problems of point pattern analysis, areal association, and regionalization. Prerequisite: Six hours of geography, MATH 119, or consent of instructor.

**GEOG 517 DESCRIPTIVE METEOROLOGY (4)**

An introduction to the various meteorological elements. Emphasis is placed on the interaction of temperature, pressure, wind, and moisture in creating weather patterns. Three hours of lecture and two hours of laboratory. Field work may be required. Prerequisite: Six hours of Natural Science or geography or the equivalent.

**GEOG 518 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS**

**(3)** Hardware and software for the storage, retrieval, manipulation, analysis, and display of data. Emphasizing raster-based geographic information systems. Prerequisite: Six hours of geography (GEOG 109 and GEOG 221 are strongly recommended).

**GEOG 519 POLITICAL GEOGRAPHY**

**(3)** Effect of political groupings upon man's use of the world, and the influence of the geographic base upon political power. Prerequisites: Six hours of geography or consent of instructor.

**GEOG 520 POPULATION GEOGRAPHY (3)**

General population theory, data sources for population geographers, and the processes of fertility, mortality, and migration. Patterns of population growth and change viewed from both temporal and geographical perspectives. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 522 URBAN SYSTEMS I (3)**

Survey of the structure, functions, forms and development of urban units. Emphasis upon the locational features of social, economic, and cultural phenomena. Field work. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 523 GIS APPLICATIONS (3)**

Geographic information systems for solving real world problems; vector-based GIS software, microcomputers for development of a GIS application. Prerequisite: Introduction to GIS or consent of instructor.

**GEOG 527 OUTDOOR RECREATION PLANNING AND MANAGEMENT (3)**

Outdoor recreation in terms of the relationships between people, land, and leisure. Principles of planning designing, and maintaining outdoor recreation areas and facilities. Field work required. Prerequisite: Introduction to GIS or consent of instructor.

**GEOG 551 GROWTH OF GEOGRAPHIC THOUGHT (3)**

History, na-

ture, and methodology of geography as a discipline. Analysis of schools of geographic thought, critical evaluation of important geographic work. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 552 PLANNING IMPLEMENTATION (3)** A study of the techniques involved in carrying out an urban plan. Zoning, subdivision control, public works policy and tax structures will be considered. The relation of planning to the political process will be emphasized. Prerequisites: GEOG 391 and GEOG 392 or equivalent and consent of instructor.

**GEOG 553 COMPREHENSIVE PLANNING (3)** The integration of separate urban systems into the comprehensive design of an urban region. Special emphasis will be placed on neighborhood, community and town planning. Field work may be required. Prerequisites: GEOG 391 and GEOG 392 or equivalent and consent of instructor.

**GEOG 557 STUDIES IN NATURAL HAZARDS (3)** The nature, frequency of occurrence, and distribution of environmental hazards and their impact on humans. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 559 GEOGRAPHICAL ASPECTS OF POLLUTION (3)** A systematic study of the spatial aspects of air and water pollution, with special emphasis on pollution in the Greater Baltimore area. Field trips will be conducted to pollution sites and pollution control agencies within the local area. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 560 GEOGRAPHY OF ANGLO AMERICA (3)** Physical and cultural landscapes of the United States and Canada including patterns of economic development of each region and their relationship to their environmental setting. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 561 GEOGRAPHY OF MARYLAND (3)** A geographical study of the Middle Atlantic region emphasizing Maryland in its megapolitan setting. Much attention will be given to the human and physical elements which have led to the prominence of this region. A supervised research paper will be an important part of this course. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 562 GEOGRAPHY OF AFRICA (3)** A systematic and regional approach to the study of people and environment of Africa, south of the Sahara. Special focus is placed on the distribution of natural resources and the historical-political development of each county as important background for the understanding of current African affairs. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 564 GEOGRAPHY OF EAST ASIA (3)** Regional studies of the physical and cultural foundations in China, Japan, and Korea. Emphasis upon human and economic resources, and role in world affairs. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 565 GEOGRAPHY OF THE MIDDLE EAST (3)** Analysis of Southwest Asia and North Africa, including major natural and cultural resources, related patterns of spatial organization, economic and political development, and associated problems. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 566 GEOGRAPHY OF EUROPE (3)** Regional analysis and appraisal of the human geography and natural resources of Europe. Problems of nationality, economic development, and cultural conflicts. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 567 GEOGRAPHY OF THE USSR (3)** Physical and cultural patterns and their bearing on the Soviet Union as a world power. Regional distribution and use of natural and human resources in agriculture and industry. Problems in economic development and production. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 568 GEOGRAPHY OF LATIN AMERICAN (3)**

Analysis of Latin America will be focusing on the interrelationships between physical and cultural elements which provide a diversity of human habitats throughout the region. Prerequisite: Six hours of geography or consent of instructor. May be repeated for a maximum of 6 credits.

**GEOG 570-579 SEMINAR: SELECTED TOPICS IN GEOGRAPHY (3)**

Reading and research in selected topics in the field of geography. Seminar topics will be announced. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 582 GEOGRAPHY/ENVIRONMENTAL PLANNING INTERNSHIP (1-6)**

Supervised placement and research in selected public and private agencies at appropriate institutions. May be repeated up to a maximum of six credits. Not open to those who completed 6 credits in GEOG 479. Prerequisite: Consent of chair and six hours in geography. May be repeated for a maximum of 6 credits.

**GEOG 583 FIELD GEOGRAPHY (2-6)**

Practical laboratory experience in techniques in the collection and analysis of data by observations, measurements, mapping, and photographic records. Such techniques are to be applied to selected geographic problems. Prerequisite: Six hours of geography or consent of instructor.

**GEOG 584 TRAVEL AND STUDY (3-6)**

Countries and topics to be selected by departments and instructors sponsoring the program. For complete information contact the chair of the department. May be repeated for a maximum of 6 credits. Prerequisite: Consent of instructor.

**GEOG 585 DIRECTED READING IN GEOGRAPHY (3)**

Independent reading in selected areas of geography. Open by invitation of the geography department to students taking a major or minor in geography. Prerequisite: 15 hours in geography and a mini-

mum average of 3.0 in geography. May be repeated for a maximum of 6 credits.

**GEOG 586 INDEPENDENT STUDY IN GEOGRAPHY (1-6)**

Independent research, study, or field experience under supervision of a member of the Geography faculty. Designed for advanced students who wish to conduct independent investigation on aspect of geography which are of special interest or not covered in other courses. Registration arranged with department chairperson. Prerequisite: Advance undergraduate standing with at least 18 hours in geography or graduate standing. May be repeated for a maximum of 6 credits.

**GEOG 601 SEMINAR ON GEOGRAPHICAL PERSPECTIVES (3)**

Study of major subfields of geography as they have emerged in the 20 century and their differing viewpoints. Prerequisite: Graduate standing.

**GEOG 621 RESEARCH TECHNIQUES (3)**

Investigation of the primary sources of information in geography and to learn the nature of original investigation. Prerequisite: Graduate standing.

**GEOG 631 REMOTE SENSING (3)**

Remote sensing systems. Interpretation and use of the data products, with emphasis on Land Satellite Imagery (Landsat). Prerequisite: Consent of department.

**GEOG 641 APPLIED PHYSICAL GEOGRAPHY (3)**

Physical environment as it influences and is influenced by human activities. Prerequisite: GEOG 101 (or equivalent).

**GEOG 642 ENVIRONMENTAL POLLUTION (3)**

World distributions of major categories of pollution - air, water, chemical, noise, solid waste, and nuclear - and their environment implications. mandatory field trips. Prerequisites: Consent of Department.

**GEOG 651 SEMINAR IN APPLIED POPULATION GEOGRAPHY (3)**

Focus on obtaining interpreting, and utilizing population data for applied purposes. Prerequisite: Consent of instructor.

**GEOG 652 SEMINAR IN MEDICAL GEOGRAPHY (3)** Medical geographic principles and techniques applied to the study of health issues in contemporary society. Emphasis on tools, methodology, and problem solving situations. Prerequisite: GEOG 37 or consent of instructor.

**GEOG 661 STUDIES IN ECONOMIC GEOGRAPHY (3)** The study of selected geographical topics dealing with spatial distributions of economic activities. Topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 671 STUDIES IN PHYSICAL GEOGRAPHY (3)** Selected geographical topics dealing with physical landscape phenomena, especially with regard to distribution, relationships, and significance to man. Topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 672-679 SPECIAL TOPICS IN GEOGRAPHY AND ENVIRONMENTAL PLANNING (3)** Topics in geography or environmental planning. Varies each semester. Prerequisite: Consent of department.

**GEOG 681 SEMINAR IN POLITICAL GEOGRAPHY (2-6)** Special subjects dealing with geography of international politics, e.g. boundary problems, global strategy, space, sovereignty. Topics to be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 683 SEMINAR: ENVIRONMENTAL PROBLEMS IN MARYLAND (3)** Individual research on a selected environmental problem in Maryland. Prerequisite: Consent of department.

**GEOG 691 URBAN GEOGRAPHY STUDIES (2-6)** Selected topics dealing with the application of geography to planning, retail and industrial location, and trade analysis. Topics to be announced. No more than six

semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 701 LAND USE STUDIES (2-6)** Selected problems on urban, rural and rural-urban landscapes which consider and account for geographic differences in land utilization. Topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 771 SEMINAR IN REGIONAL GEOGRAPHY (2-6)** Description, analysis and interpretation of natural and cultural phenomena in certain significant geographic regions. Seminar topics will be announced. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 797 RESEARCH (2-6)** Investigation of problem or problems based upon field and library study, which will contribute to geographical knowledge. No more than six semester hours may be applied toward a degree. Prerequisite: Consent of department.

**GEOG 898 MASTER'S THESIS (6)** Prerequisites: GEOG 621 and consent of department.

**GEOG 899 THESIS CONTINUUM (1)**

## **GEOLOGY (GEOL)** \_\_\_\_\_

**GEOL 515 HYDROGEOLOGY (4)** Geologic aspects of groundwater; origin, occurrence, and movement; resource evaluation; flow modeling; and contamination. Prerequisites: Required: CHEM 102; PHYS 212 or PHYS 242; commended: GEOL 321 and GEOL 443.

**GEOL 531 MINERALOGY (4)** The study of minerals with emphasis on crystallography, crystal chemistry, and chemical-structural classification. Laboratory identification of minerals both in hand specimen and thin section by application of principles of optical mineralogy.

Three lecture hours and two hours laboratory.  
Prerequisites: GEOL 121; CHEM 101.

**GEOL 533 PETROLOGY OF IGNEOUS AND METAMORPHIC ROCKS (4)** Study of the properties and genesis of two major rock groups. Megascopic and microscopic techniques in rock classification. Environments of formation. Three lecture hours and two hours laboratory. Prerequisite: GEOL 331.

**GEOL 541 OPTICAL MINERALOGY AND PETROGRAPHY (3)** This course includes the theory and application of polarized light and elements of crystallography in the analysis of rock forming minerals by use of a petrographic microscope. Prerequisite: GEOL 333.

**GEOL 543 SEDIMENTOLOGY AND STRATIGRAPHY (4)** Processes by which sediments are produced, transported and deposited. Analysis of sediments and sedimentary bodies for the development facies models useful in interpretation of the stratigraphic record. Offered fall semester alternate years. Two hours of laboratory and two hours of lecture per week. Prerequisites: GEOL 121 and CHEM 101.

**GEOL 557 PHYSICAL OCEANOGRAPHY (3)** Physical, chemical, and geologic characteristics of ocean basins, boundaries, and sea water including origin and behavior of waves and currents. Prerequisites: PHYS 211 or PHYS 241 and CHEM 101, or consent of instructor.

## GERMAN (GERM) —————

**GERM 527 GERMAN CLASSICISM (3)** Goethe, Schiller, Lessing and others. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 531 ROMANTICISM (3)** German literature during the Romantic era (1790-1830) Hoelderlin, Novalis, Brentano, Tieck, Grillparzer. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 541 MODERN GERMAN LITERATURE (3)** The modern masters; Kafka, Mann, Hesse, Rilke, Brecht. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 542 GERMAN LITERATURE SINCE 1945 (3)** Themes and movements since World War II. Poetry: Eich, Enzensberger, Celan, Bachmann; prose fiction: Boell, Grass; drama: Borchert, Duerrenmatt, Frisch. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 561 GERMAN DRAMA OF THE 19TH AND 20TH CENTURIES (3)** The development of modern German drama in the successive literary movements, beginning with Kleist. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 565 GOETHE'S FAUST (3)** A study of background, themes and structures of this masterpiece. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 570-579 SPECIAL TOPICS IN GERMAN (3)** Discussion of central topic with changing emphasis from year to year. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 581 THE GERMAN NOVELLE (3)** The theory and development of the Novelle in German literature from Goethe to the present. Conducted in German. Prerequisite: GERM 321 or equivalent.

**GERM 591-592 DIRECTED READINGS IN GERMAN (1-3)** Reserved for superior students under the guidance of a departmental advisor. Conducted in German. Prerequisite: Graduate standing.

**GERM 670-679 SPECIAL TOPICS IN GERMAN (3)** Discussion of a central topic concerning literature and society with changing emphasis from year to year. Prerequisite: Undergraduate degree in German or consent of department chairperson.

**HEALTH SCIENCE (HLTH)** 

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**HLTH 501 TEACHING ABOUT DRUGS AND SEX (3)**

Content, procedures and methods for presenting sensitive subjects including human sexuality and drugs. Prerequisite: Permit only.

**HLTH 505 DRUGS IN OUR CULTURE**

(3) An in-depth review of harmless, harmful, useful and useless substances which may affect behavior or mood; the interaction of psychological, sociological and physiological components included. Prerequisite: Permit only.

**HLTH 511 HEALTH AND LATER MATURITY - THE AGING PROCESS (3)**

An approach to the conservation of human resources with emphasis on understanding attitudes and practices related to health in later maturity. Designed for students with a personal or professional interest in the field.

**HLTH 541 LEGAL & ETHICAL ISSUES IN HEALTH ADMINISTRATION (3)**

Examines legal and ethical issues in the administration of health programs. Emphasis is placed on the impact of cost-containment efforts, quality and malpractice concerns, profit-seeking in health, biomedical advances, and new delivery mechanisms. Prerequisite: Consent of instructor.

**HLTH 551 ECOLOGICAL ASPECTS OF HEALTH (3)**

An examination of the interrelationship between man and his environment. Emphasis is placed upon health aspects of pollution, housing, sanitation, radiation, behavioral disorders and epidemiology. Prerequisite: Permit only.

**HLTH 570-579 HEALTH WORKSHOP**

(3) For teachers, administrators, and individuals concerned about health related fields. Contemporary health aspects are considered with emphasis on implementation of positive behavior aimed at improving the health of the individual and the community. Students who elect this course for six credits will participate in two workshops. Enrollment is limited 25.

**HLTH 591 HEALTH DIRECTED READINGS (1-3)** Independent reading in health or related disciplines. Prerequisite: Permit only.

**HLTH 595 INDEPENDENT STUDY (3)**

Directed study on specific problems in health and related fields. Prerequisite: Permit only.

**HLTH 601 PROBLEMS IN SCHOOL HEALTH (3)**

Structure, organization, scope, content and practices in school health as revealed through literature and research.

**HLTH 611 CURRENT LITERATURE IN HEALTH (3)**

Research findings concerning health knowledge, attitudes, behavior, and educational techniques. A comprehensive review of health-related periodicals. Prerequisite: Permission of instructor.

**HLTH 615 COMMUNITY HEALTH: QUALITATIVE & QUANTITATIVE ELEMENTS (3)**

Vital and health statistics, population dynamics, epidemiology, quantitative models and simulation for health systems planning/evaluation. Prerequisite: Permission of instructor.

**HLTH 617 HEALTH ADMINISTRATION (3)**

Dynamics of the health industry: concepts of management and administration. Prerequisite: Permission of instructor.

**HLTH 625 RESEARCH METHODS IN HEALTH (3)**

Research and statistical designs related to health science and allied health disciplines. Prerequisite: HLTH 615.

**HLTH 627 HEALTH AND WORKER PERFORMANCE (3)**

Analyzes health issues that affect worker performance, e.g., high blood pressure, cancer, substance abuse, divorce, career crises, aging, AIDS, sexual abuse, and child care arrangements from the view of the employee. Emphasis is on the content of each issue with direct application to worksite problems. Prerequisite: HLTH 631.

**HLTH 631 PROGRAM PLANNING IN HEALTH EDUCATION (3)**

Planning mod-

els in health with integration to program planning for health information and health promotion. Skills developed in proposal writing. Prerequisite: Permission of instructor.

### **HLTH 633 HEALTH CARE SYSTEMS**

**(3)** Development of the American health care system and trends in organization, administration, funding, and legislation. Prerequisite: Permission of instructor.

### **HLTH 635 EDUCATIONAL STRATEGIES FOR HEALTH**

**(3)** A seminar analyzing application of education and social science theories for health promotion and health education. Prerequisite: Permission of instructor.

### **HLTH 637 SKILL DEVELOPMENT: LEADERSHIP IN THE HEALTH CARE SETTING**

**(3)** Didactic and experiential activities in community health education with emphasis on human interaction leadership skills. Prerequisite: Permission of instructor.

### **HLTH 639 EDUCATION AND TRAINING IN HEALTH CARE**

**(3)** The adult learner and health education. Recommended as the first course in all Health Science Program concentrations. Prerequisite: Permission of instructor.

### **HLTH 641 PATIENT EDUCATION: INTRODUCTION AND APPLICATION**

**(3)** Education of the patient in terms of personal health behavior in relation to chronic and communicable disease. Emphasis on local patient education programs. Prerequisite: Permission of instructor.

### **HLTH 643 HEALTH EDUCATION: CURRICULUM DEVELOPMENT AND SUPERVISION**

**(3)** Methods and techniques for designing and implementing school health education. Prerequisite: Permission of instructor.

### **HLTH 645 HEALTH CARE POLICY**

**(3)** An examination of public and private health care policy making and implementation. Particular attention is paid to current policy issues, and to the roles and powers of consum-

ers, administrators, legislators, and regulators. Prerequisite: Permission of instructor.

### **HLTH 647 HEALTH CARE FINANCIAL MANAGEMENT**

**(3)** Examines financial aspects of health care, including, accounting and budgeting. Aspects of production, distribution and organization and health services are reviewed from financial and economic perspectives. Prerequisite: HLTH 615.

### **HLTH 649 PROGRAM EVALUATION**

**(3)** This course will describe the purpose, applications, and role of evaluation and promotion programs. It will enable the students to understand and apply three levels of evaluation: process evaluation, program evaluation, and evaluation research. Prerequisite: HLTH 631.

### **HLTH 651 PLANNING AND MARKETING HEALTH IN BUSINESS AND INDUSTRY**

**(3)** Health promotion and delivery in the profit and not-for-profit sectors. Concepts and application of planning and marketing health in various settings. Prerequisite: HLTH 617.

### **HLTH 670-679 SPECIAL TOPICS**

**(3)** Focuses on currently important health topics: fitness in a hypokinetic world, aging, death, alcohol and its abuse, consumerism, disease, weight control, value clarification, developing a personal philosophy of health. Prerequisite: Permit only.

### **HLTH 689 FIELD EXPERIENCE**

**(3-6)** Supervised on-site experience in the following community health settings: hospital, clinic, agencies, business/industry. Prerequisite: permit only.

### **HLTH 691 DIRECTED READINGS IN HEALTH**

**(3)** Individual study of a problem in health through consultation with faculty members. Prerequisite: Permit only.

### **HLTH 695 INDEPENDENT STUDY**

**(3)** Directed study on specific problems in health and related fields. Prerequisite: Permit only.

**HLTH 785 GRADUATE SEMINAR IN HEALTH (3)** Analysis of research trends and issues in health education. Student presentation of research designs and projects. Professional membership and ethics. Prerequisite: HLTH 625.

**HLTH 897 GRADUATE PROJECT IN HEALTH SCIENCE (3)** Individual study and preparation of a project which is oriented toward the application of specific techniques in health education. Prerequisite: HLTH 785.

**HLTH 898 MASTER'S THESIS IN HEALTH (6)** An original investigation using an acceptable research method and design conducted under the direction of one or more faculty members. Prerequisite: HLTH 785.

**HLTH 899 THESIS CONTINUUM (1)**

## **HISTORY (HIST)** \_\_\_\_\_

**HIST 501 ANCIENT NEAR EASTERN CIVILIZATIONS (3)** The civilizations of Mesopotamia and Egypt and the peripheral developments in Syria-Palestine and Asia Minor. Prerequisite HIST 101 or consent of instructor.

**HIST 503 HELLENISTIC CIVILIZATION (3)** The civilization that arose in the Mediterranean Basin after the conquests of Alexander and the Roman Empire within this context. Prerequisite HIST 101 or consent of instructor.

**HIST 504 ANCIENT GREEK CIVILIZATION (3)** The civilization of classical Greece, including the Minoan and Mycenaean bronze age antecedents, to 362 B.C. Prerequisite: HIST 101 or consent of instructor.

**HIST 505 ROMAN CIVILIZATION (3)** The civilization of ancient Rome from the foundation of the city to the collapse of the Roman empire in the West. Prerequisite: HIST 101 or consent of instructor.

**HIST 506 WOMEN IN 20TH CENTURY U.S. HISTORY (3)** A multicultural perspective

on politics, work, family and sexuality in women's lives in the United States from 1900 to present. Prerequisites: HIST 146 or WMST 231 or consent of instructor.

**HIST 507 DEMOCRATIZATION IN LATIN AMERICA (3)** Analysis of the failure and successes in building democratic political institutions in Latin America; emphasis on 1930s-present. Not open to students who have not completed 434 or 592 Fall 1993. Prerequisite: HIST 122 or permission of instructor.

**HIST 509 TRADITIONAL INDIA: ITS HISTORICAL DEVELOPMENT (3)** Development of the history and culture of India from prehistoric times until the beginnings of European dominance in the eighteenth century. Prerequisite: Six credits in history or consent of instructor.

**HIST 510 HISTORY OF MODERN INDIA (3)** The history of the Indian subcontinent since 1750. Stressing the rise of British power, the colonial experiences, the development of nationalist movements, and the problems of independence in present-day India, Pakistan, and Bangladesh. Prerequisite: Six credits in history or consent of instructor.

**HIST 512 IMPERIAL CHINA: THE LAST DYNASTY (3)** Ching (Qing) Dynasty, 1644-1912; focus on the nineteenth century collision of imperial China and the West. Prerequisites: HIST 111 or six credits of history.

**HIST 513 REVOLUTIONARY CHINA (3)** The on-going Chinese revolution from the overthrow of the imperial government and through the Nationalist and Communist periods. Prerequisites: HIST 111 or HIST 314 or six credits in history.

**HIST 515 TWENTIETH CENTURY JAPAN (3)** Japan's prewar political and social development, militarism, defeat in World War II, and postwar political and economic development. Prerequisite: HIST 117 or HIST 315 or six credits in history.

**HIST 518 MODERN KOREA (3)** Korea in the 19TH and 20TH centuries, including Japanese colonial control, postwar division, the Korean War, and the political and economic development of North and South Korea. Prerequisite: Six credits in history on consent of the instructor.

**HIST 519 JAPAN, 1830-1930 (3)** Japan's transition from feudalism and national seclusion to emergence of a modern nation-state with overseas empire and a parliamentary form of government. Prerequisites: HIST 110, 111 or six credit hours of HIST.

**HIST 520 JAPAN, 1930- PRESENT (3)** Japan's transition from militarism and foreign aggression in the 1930's to postwar pacifism, democracy and dynamic economic growth. Prerequisites; HIST 111, 119 or six credit hours of HIST.

**HIST 521 HISTORY OF MEXICO: PRE-COLUMBIAN AND COLONIAL (3)** The political, economic, social, and cultural developments from early pre-Columbian civilizations to the movement for independence. Prerequisite: Six credits in lower division history.

**HIST 522 HISTORY OF MEXICO: NATIONAL PERIOD (3)** The political, economic, social, and cultural developments from independence to the present. Prerequisite: Six credits in lower division history.

**HIST 526 GAY AND LESBIAN IN U.S. HISTORY (3)** multicultural perspectives on gay and lesbian cultures and communities and their struggles against institutionalized homophobia in education, the military, the media, medicine, religion, and government. Prerequisite: 3 credits in History or Women's Studies or consent of instructor.

**HIST 527 EUROPEAN MILITARY HISTORY 1871-1925 (3)** Minor wars of 1871-1913, build-up to World War I, the war and its aftermath, seen in the context of diplomatic, political, and socio-economic history. Not open to students who have had 413. Prerequisite: HIST 242 or consent of the instructor.

**HIST 529 EUROPEAN MILITARY HISTORY 1925-1945 (3)** Military institutions of the interwar period, build-up to World War II, the European War, seen in the context of diplomatic, political, and socio-economic history. Not open to students who have had 413. Prerequisite: HIST 242 or consent of the instructor.

**HIST 531 AMERICAN MILITARY HISTORY 1898-1945 (3)** Campaigns, tactics, and institutional development of the armed forces in the context of politics and diplomacy from the Civil War through the Great Depression. Prerequisite: HIST 146.

**HIST 532 AMERICAN MILITARY HISTORY SINCE 1945 (3)** Campaigns, tactics, and institutional development of the armed forces in peace and war, seen in the context of politics and diplomacy; emphasis on World War II, Korea, and Vietnam. Prerequisite: HIST 146.

**HIST 533 THE AMERICAN COLONIES: 1492-1763 (3)** Founding and the political, economic, and social development of the American colonies. Prerequisite: HIST 145 or HIST 241 or consent of instructor.

**HIST 534 THE AMERICAN REVOLUTIONARY PERIOD: 1763-1789 (3)** From the end of the Seven Years' War to the ratification of the Constitution. Prerequisite: HIST 145 or HIST 241 or consent of instructor.

**HIST 535 THE EARLY NATIONAL PERIOD (3)** The United States from the Constitutional Convention to the Election of 1820. The Federalist Decade and the Jeffersonian Era. Prerequisite HIST 145.

**HIST 536 THE JACKSONIAN ERA (3)** The United States from 1815 to 1845; political, social, and economic currents of the period. Prerequisite: HIST 145.

**HIST 537 THE CIVIL WAR (3)** Sectionalism, the coming of the War, and the War years. Emphasis on political, economic, and social issues. Prerequisite: HIST 145.

**HIST 538 THE EAR OF RECONSTRUCTION (3)** Political, economic, and social study of the Reconstruction era, the War years to 1877, and its aftermath. Prerequisite: HIST 145.

**HIST 539 THE U.S. 1865-1901: AGE OF ENTERPRISE (3)** Industrialization of the United States, the rise of big business and an examination of resulting problems in economic, social and political life. Prerequisite: HIST 145 or HIST 146.

**HIST 540 THE U.S. 1892-1920: AGE OF REFORM (3)** America's efforts to deal with the political, social, and economic problems of industrial life; emphasis on the Populist movement; imperialism and the Spanish-American War; the administrations of Theodore Roosevelt, William Howard Taft, and Woodrow Wilson. Prerequisite: HIST 145 or HIST 146.

**HIST 541 THE F.D.R. ERA (3)** History of the United States from the 1920s through World War II, with emphasis on the presidential years of Franklin D. Roosevelt. Prerequisite: HIST 146.

**HIST 542 RECENT AMERICAN HISTORY: 1945-1975 (3)** History of the United States from World War II through the mid 1970s, including political, social, economic, and diplomatic developments. Prerequisite: HIST 146.

**HIST 545 SOCIAL HISTORY OF THE UNITED STATES SINCE 1865 (3)** history of American life from the Civil War to the present, focusing on problems relating to social structure, popular culture, family religious and educational institutions. Prerequisite: HIST 146.

**HIST 546 A HISTORY OF AMERICAN BUSINESS (3)** A study of industry, finance, commerce and agriculture from the Civil War to the present. Prerequisites: Three credits in history and either consent of instructor or Junior standing.

**HIST 547 CONSTITUTIONAL HISTORY OF THE UNITED STATES TO 1863 (3)** Development of American constitutionalism in theory and practice to 1868. Prerequisite: HIST 145.

**HIST 548 THE BILL OF RIGHTS AND THE CONSTITUTION : 1941 TO THE PRESENT (3)** Interpretation of the Bill of Rights before and after the Warren Court. Prerequisite: HIST 146.

**HIST 549 DIPLOMATIC HISTORY OF THE UNITED STATES TO 1900 (3)** Evolution of the American national interest in foreign relations with Europe, Latin America, and the Far East from colonial times to 1900. Emphasis upon the changing character and role of objectives, policies, commitments, and forces. Prerequisite: HIST 145 or HIST 146.

**HIST 550 DIPLOMATIC HISTORY OF THE UNITED STATES SINCE 1900 (3)** Continuation of HIST 369 to the present with added interest in the emergence of the United States as a major world power. The role of the United States in modern warfare, world-wide economic and financial affairs, overseas expansion, the diplomatic impact of conflict in ideologies, and current international crisis. Prerequisite: HIST 145 or HIST 146.

**HIST 551 EARLY AMERICAN FRONTIER (3)** The westward movement and the effect of the frontier process on social, economic, and political institutions of the United States and the attitudes of the American people to 1850. Prerequisite: HIST 145.

**HIST 552 THE FAR WESTERN FRONTIER (3)** The expansion into the Trans-Mississippi West and the impact of the frontier process on the attitudes of the American people and on the social, economic, and political institutions of the United States in the nineteenth and twentieth centuries. Prerequisite: HIST 146.

**HIST 553 THE CITY IN AMERICAN HISTORY (3)** The development of the city and its impact on American social, cultural, intellectual, political, and economic life. Prerequisite: HIST 146.

quisites: HIST 145, HIST 146 or two of the following: GEOG 391, SOCI 327, POSC 305 or consent of instructor.

**HIST 554 THE IMMIGRANT IN AMERICAN HISTORY (3)** History of the immigrant experience in America from the colonial period to the present. Emphasis on migration patterns, receptivity of native society, assimilation and acculturation process. Prerequisites: HIST 145 and HIST 146.

**HIST 555 HISTORY OF NATIVE AMERICANS: THE EAST (3)** Topical and regional ethnohistory of the native peoples of Eastern America, and their relations with non-native peoples and governments, precontacts to the present. Prerequisite: Three credits in American history.

**HIST 556 HISTORY OF NATIVE AMERICANS: THE WEST (3)** Topical and regional ethnohistory of the native peoples of Western America and their relations with non-native peoples and governments, precontacts to the present. Prerequisite: 3 credits of American history. Not open to those who have completed Indian-White Relations in American History.

**HIST 557 HISTORY OF AFRO-AMERICANS (3)** History of Americans of African ancestry from their West African background to the present. Emphasis on black Americans' thought, activities, organizations, and their role in developing America. Prerequisites: HIST 145 and HIST 146.

**HIST 558 AMERICAN LABOR (3)** The changing nature of agricultural, domestic, and industrial work; business-labor relations; labor unions and leaders; role of labor in mainstream and radical political movements. Emphasis on the late nineteenth and twentieth centuries. Prerequisite: HIST 146 or three credits in economics.

**HIST 559 HISTORY OF CANADA (3)** Canadian history with emphasis on the period since 1867. Particular attention will be given to the problems of cultural dualism and con-

federation. Prerequisite: HIST 145 or HIST 146 or HIST 242 or POSC 101.

**HIST 560 HISTORY OF MARYLAND FROM COLONIAL TIMES TO THE PRESENT (3)** Major events and forces that have shaped the political, social, cultural, and economic development of Maryland. Prerequisite: Three credits in United States history.

**HIST 562 MINORITY WOMEN IN U.S. HISTORY (3)** The female experience among ethnic, racial, religious and sexual minorities in the United States. Prerequisites: Six credit hours in history and/or women's studies courses.

**HIST 563 AFRICAN-AMERICAN HISTORY TO THE MID-NINETEENTH CENTURY (3)** Political, economic and social history of African-Americans from their African origins through the antebellum period. Prerequisite: HIST 145.

**HIST 564 AFRICAN-AMERICAN HISTORY FROM THE MID-NINETEENTH CENTURY (3)** Political, economic and social history of African-Americans from the Civil War through the Civil Rights Era. Prerequisite: HIST 146.

**HIST 565 IMMIGRANTS & IMMIGRATION IN THE U.S. (3)** Comparative social, cultural and economic history of selected ethnic groups and their relationship to the dominant culture. Emphasis on the late nineteenth and twentieth centuries. Prerequisite: 3 credits of United States history or consent of the instructor.

**HIST 567 THE EARLY MIDDLE AGES: 300-1050 (3)** The rebuilding of Europe after the collapse of the Roman Empire. Emphasis on the Church Fathers, the Germanic tribes, Carolinian culture, Feudalism and the Vikings. Prerequisite: HIST 341, HIST 211 or consent of instructor.

**HIST 568 THE HIGH MIDDLE AGES: 1050-1350 (3)** The flowering of medieval culture. Emphasis on the role for the church, the

mergence of the national monarchies of western Europe, and the creation of towns and universities. Prerequisite: HIST 241, HIST 211 or consent of instructor.

**HIST 569 THE RENAISSANCE ERA: 1300-1500 (3)** Political, economic, social, and cultural changes in late medieval and Renaissance Europe. Prerequisite: HIST 241 or HIST 211 or consent of instructor.

**HIST 570 THE REFORMATION: 1500-1648 (3)** Religious, political, economic, and social changes in Reformation and Counter-Reformation Europe. Prerequisite: HIST 241, HIST 211 or consent of instructor.

**HIST 577 ECONOMIC HISTORY OF EUROPE TO THE MID-EIGHTEENTH CENTURY (3)** A study of European economy to the middle of the eighteenth century. Particular attention will be given to the development of commerce, capitalism, manufacture, and mercantilism. Prerequisite: HIST 241.

**HIST 578 ECONOMIC HISTORY OF EUROPE SINCE THE MID-EIGHTEENTH CENTURY (3)** The industrialization of Great Britain, France, Germany, Russia, and peripheral nations form the middle of the eighteenth century. Prerequisite: HIST 242.

**HIST 579 EUROPEAN IDEAS: FRENCH REVOLUTION TO THE PRESENT (3)** Religious, scientific, political, and social theories of the European intellectual class seen in their historical content from the French Revolution to the present. Prerequisite: HIST 242 or consent of instructor.

**HIST 580 GREAT BRITAIN IN THE TWENTIETH CENTURY (3)** Political, social, and economic developments in Great Britain from 1897 to the present with emphasis on social reform, the two World Wars, Socialism and the Labor Party, economic decline, the dismantling of the Empire, and entry into the European community. Prerequisite: HIST 201, HIST 202 or HIST 242.

**HIST 581 FRANCE: 1763-1871 (3)** Old Regime and the impact of successive revolutions upon French society. Emphasis upon the role of France in the growth of European liberalism and nationalism. Prerequisite: HIST 242.

**HIST 582 GERMANY: 1871-1945 (3)** Brief topical analysis of the nineteenth century background. Concentration on the Bismarckian Empire, Weimar Republic, and the Third Reich, emphasizing the interrelationships between internal developments and Germany's role in Europe and the world. Prerequisite: HIST 242.

**HIST 584 RUSSIA/SOVIET UNION: 1894-1953 (3)** Political, ideological, economic, and cultural factors influencing the fall of the monarch, the Bolshevik Revolution, Leninism, and Stalinism. Prerequisite: HIST 242 or consent of instructor.

**HIST 585 HISTORY OF SOVIET RUSSIA SINCE STALIN: 1953 TO PRESENT (3)** Topical analysis of political history and theory, economic development, foreign affairs, social change, and cultural and literary trends. Prerequisite: HIST 242 or ECON 331 or POSC 338 or POSC 339 or POSC 432 or GEOG 453.

**HIST 586 EUROPE IN THE THIRD WORLD: COLONIALISM TO CRISIS (3)** The impact of modern European Colonialism on the societies of the Third World, chiefly Africa and Asia. Primary emphasis on the nineteenth and twentieth centuries. Prerequisite: HIST 242 or consent of instructor.

**HIST 587 A HISTORY OF DIPLOMACY (3)** Evolution from its origins to the present with emphasis on the modern period. Historic changes which shifting ideologies and new technologies have wrought in the role of the diplomat. Prerequisites: HIST 242 and HIST 242.

**HIST 588 HISTORY OF MANAGEMENT (3)** The theory, organization, and operation of selected political, religious, mili-

tary, economic, and social institutions of the western world. Prerequisite: Three credits in history and either consent of instructor or Junior standing.

**HIST 589 THE FOREIGN POLICY OF THE SOVIET UNION (3)** An examination of the twin pillars of Soviet foreign policy since 1917; international Marxism and the defense of Mother Russia. Prerequisite: HIST 151 or HIST 231 or HIST 452 or HIST 453 or POSC 432.

**HIST 590 INTERPRETIVE PROBLEMS IN HISTORY (3)** An in-depth study of historical interpretations of selected topics; may be repeated in a different topic for a total of six credits. Prerequisite: Twelve credits in history appropriate to topic.

**HIST 591 BIOGRAPHICAL STUDIES IN HISTORY (3)** A study of selected historical figures who have shaped or reflected the past. Figures to be selected by the instructor; may be repeated in different historical figures for a total of six credits. Prerequisite: Six credits in history appropriate to topic.

**HIST 592 HISTORICAL THEMES (3)** A study through lectures and discussions of a historical topic selected by the instructor; may be repeated in a different topic for a total of six credits. Prerequisite: Six credits in history appropriate to topic.

**HIST 593 DIRECTED INDIVIDUAL RESEARCH (2-4)** Research and reading dealing with a historical topic to be selected by the instructor and student; considerable attention to methodology; may be repeated for a total of six credits. Prerequisites: Fifteen credits in history and a minimum average of 3.0 in history and consent of instructor and Department Chair.

**HIST 594 TRAVEL AND STUDY (3-6)** Countries and topics to be selected by the Departments and instructors sponsoring the program. For complete information, write the Chair of the Department early in the fall of the academic year preceding the semester of in-

tended study; may be repeated in different countries and topics for a total of six credits. Prerequisites: Upper division status and consent of instructor.

**HIST 596 COLLOQUIUM (3)** Group discussion of reading in history or related disciplines approached from a viewpoint that is primarily historical and dealing with broad periods, topics, problems or comparative developments selected by the instructor(s); may be repeated in a different topic for a total of six credits. Prerequisites: Consent of instructor and fifteen credits in history or nine credits in history and six credits in the related discipline.

**HIST 597 DIRECTED READING (2-4)** Independent reading in history or related disciplines approached from a viewpoint that is primarily historical and dealing with specific periods, topics, problems or comparative developments selected by the student in consultation with the instructor(s); may be repeated for a total of six credits. Prerequisites: Fifteen credits in history or nine credits in history and six credits in the related discipline and a minimum average of 3.0 in history and the related discipline and consent of Department Chair.

**HIST 783 DIRECTED INDIVIDUAL RESEARCH (2-4)** Research and reading with a historical topic to be selected by the instructor and student. Prerequisites: 18 hours of History and consent of the instructor and department chairperson.

**HIST 797 DIRECTED READING IN HISTORY (2-4)** Reading in areas of history selected by the instructor and the student. Prerequisites: Graduate standing and 18 hours of History and consent of the instructor and Department Chairperson.

## INSTRUCTIONAL TECHNOLOGY (ISTC) ---

**ISTC 501 UTILIZATION OF INSTRUCTIONAL MEDIA (2-3)** Materials, devices, techniques and settings are presented in an overview of the field of instructional tech-

nology. Laboratory experiences are provided in the operation of instructional hardware. Must be taken for two hours credit if student has taken ISTC 269. Prerequisite: Junior standing or above or departmental approval.

**ISTC 523 INSTRUCTIONAL MOTION PICTURE FILM-MAKING I (3)** This course provides an introduction to the production of motion picture films designed for instructional use. Included in the course are basic film-making techniques, scripting, editing, and a survey of motion filming equipment. Prerequisite: Junior standing or above.

**ISTC 531 INTRODUCTION TO INSTRUCTIONAL TELEVISION (3)** The course will explore the design and production of non-commercial television production of student videotapes, script planning and instructional design competencies will be emphasized. Prerequisite: Junior standing or above.

**ISTC 541 COMPUTER TECHNOLOGY AND UTILIZATION (3)** Exploratory course concerned with the rationale for and use of computers in learning and related administrative matters. Techniques are examined for the organization, storage, processing, and retrieval of data. Applications include the computer for instruction, the management of instruction, simulation, and time sharing computer experiences are provided. Field trips to on- and off-campus computer installations are taken. (Note: The course will not prepare students for occupations in computer science.) Prerequisite: Junior standing or above.

**ISTC 553 INTRODUCTION TO INSTRUCTIONAL PHOTOGRAPHY (3)** This course presents basic planning and darkroom methods for preparing photographic materials. Although the trust of the course is the black and white mode, color slides and other special topics are treated. Principles of visual literacy are stressed. Students are required to demonstrate competencies in darkroom utilization and print critiquing as well as print production. Prerequisite: Consent of Department Chair.

**ISTC 571 REFERENCE AND INFORMATION SOURCES (3)** The bibliographic method, fundamental reference sources, and searching techniques for print and non-print materials are examined. Students are required to demonstrate competencies in the use of reference sources. Prerequisite: Junior standing or above.

**ISTC 573 CATALOGING AND CLASSIFICATION OF MEDIA (3)** Cataloging, subject analysis, classification and bibliographic control. The use of commercial processing services and central processing in the school system. The concept of a unified catalog and materials center for print and non-print materials is stressed. Prerequisite: Junior standing or above.

**ISTC 601 ORGANIZATION AND ADMINISTRATION OF MEDIA CENTER PROGRAMS (3)** Organizational patterns, management procedures, and supervisory methods and techniques for instructional materials centers. Topics include: facilities, finance, selection, procurement, security and basic maintenance of equipment and materials; center operation, extension and in-service programs, assessments of systems and programs, and public relations. Prerequisite: Six upper division credits of ISTC courses.

**ISTC 615 MEDIA SELECTION (3)** Criteria used to select media, classroom management techniques in using media, and various evaluation instruments. Prerequisite: Six upper division credits of ISTC courses.

**ISTC 617 DISTANCE EDUCATION IN THEORY AND PRACTICE (3)** Relevant concepts and issues in distance education including theoretical foundations, existing institutions and concepts and current practice.

**ISTC 633 INSTRUCTIONAL TELEVISION (3)** The ITV movement; ITV systems and terminology; elements of production; classroom utilization of the ITV product; developing the ITV workshop; careers in ITV; and aspects of administration, philosophy, evaluation, and research in ITV. Prerequisite: Six upper division credits of ISTC courses.

**ISTC 634 INDEPENDENT STUDY: INSTRUCTIONAL MOTION PICTURE FILMMAKING II (3)**

Scriptwriting techniques, directional techniques, including areas such as: background, audio, lighting, and optics applications. Special effects techniques, such as animation, slow and stop motion. Prerequisite: ISTC 423, and consent of chairperson.

**ISTC 635 THEORY AND DESIGN OF INTERACTIVE VIDEO (3)**

Theoretical basis for the development of interactive video, including theory of interactive instruction, the development process, hardware, software and interactive authoring systems. Prerequisite: ISTC 301 or ISTC 441 or ISTC 667 or equivalent.

**ISTC 655 MEDIA DESIGN AND PRODUCTION I (3)**

The design and production of a teacher-made instructional material and the production of materials. Prerequisite: Bachelor's degree.

**ISTC 656 MEDIA DESIGN AND PRODUCTION II (3)**

Production techniques and planning of instructional materials. Research and theory relevant to perception and communication are explored. Prerequisites: ISTC 655 and consent of chairperson.

**ISTC 663 APPLIED PSYCHOLOGY OF LEARNING (3)**

Behaviorist and Gestalt learning theories and the principles of Gagne Piaget. Prerequisites: ISTC 301 and one other instructional technology course.

**ISTC 667 INSTRUCTIONAL DEVELOPMENT (3)**

Includes an overview of the systems approach and its use in problem solving. The application of the systems approach with instructional technofacilities designed for individually prescribed and for large group instruction is studied in detail. Students are required to demonstrate competencies in designing mediated or multi-media instructional sequences and in evaluating media with behavioral descriptors. Prerequisites: ISTC 663 and written permission.

**ISTC 671 ADVANCED REFERENCE (3)**

Bibliographic and research for the retrieval of information using manual and automated information delivery system techniques. Prerequisites: ISTC 471 or equivalent.

**ISTC 673 INSTRUCTIONAL FACILITIES DESIGN (3)**

A systems approach to the integration of media and facilities into a unit to fulfill instructional training goals. Time and sequential phasing relationships. Prerequisites: six upper division hours of instructional technology at the 500 level or above, and consent of chairperson.

**ISTC 674-679 SPECIAL TOPICS IN INSTRUCTIONAL TECHNOLOGIES (3-6)**

Topics selected from the instructional technology field which are innovative and of immediate concern to existing instructional needs. May be repeated to a maximum of six credit hours with no topic repeated. Prerequisite: Bachelor's degree.

**ISTC 685 RESEARCH IN INSTRUCTIONAL TECHNOLOGY (3)**

Elements of research writing inferential statistics and research in the field of instructional technology. Prerequisites: Six credits of ISTC courses at the 600-700 level and consent of chairperson.

**ISTC 687 COMPUTER ASSISTED INSTRUCTION (3)**

The relationship between programmed instruction and computer-assisted instruction is examined. Students are required to demonstrate competencies in the design and production of computer-assisted instruction. Prerequisites: ISTC 441 or equivalent and departmental consent.

**ISTC 691 DIRECTED READINGS IN INSTRUCTIONAL TECHNOLOGY (3)**

Independent readings and research in selected areas of instructional technology. Prerequisite: Consent of chairperson.

**ISTC 695 INDEPENDENT STUDY IN INSTRUCTIONAL TECHNOLOGY (3)**

Individual and supervised study of research problems and special projects in specific areas

of Instructional Technology. Prerequisite: Consent of chairperson or instructor.

### **ISTC 789 GRADUATE PRACTICUM IN INSTRUCTIONAL TECHNOLOGY (3-6)**

Work in a school media center under professional supervision, satisfies practicum requirements for certification as a media specialist or media generalist. Prerequisites: ISTC 471; ISTC 473; ISTC 601 and 15 additional credits in instructional Technology and consent of chairperson.

### **ISTC 797 GRADUATE INTERNSHIP IN INSTRUCTIONAL TECHNOLOGY (3)**

Project under the direction of a faculty advisor. The course may be taken twice for credit. Prerequisites: ISTC 795 and consent of chairperson.

### **ISTC 898 MASTER'S THESIS (6)**

An original investigation, using research method and design, of a research problem. Credit granted after thesis accepted. Prerequisite: Consent of chairperson.

### **ISTC 899 THESIS CONTINUUM (1)**

## **KINESIOLOGY (KNES) —————**

### **KNES 509 STRESS MANAGEMENT, TENSION CONTROL AND HUMAN PERFORMANCE (3)**

Presents information about the manifestation of stress and systematic programs for tension control. The correlates surrounding progressive muscle relaxation and biofeedback are explored in detail as well as the neurological responses which produce tension responses. Lectures are combined with laboratory experiences in an effort to understand and practice relaxation techniques. Prerequisites: One psychology and/or biological science course.

### **KNES 515 ADVANCED CARE AND PREVENTION OF ATHLETIC INJURIES (3)**

Care and treatment of athletic injuries not covered in PHEC 315; fitting and evaluation of protective equipment; drugs in

athletics; and the use of physical therapy modalities. Prerequisite: PHEC 315 or equivalent, or consent of instructor.

### **KNES 523 ADAPTIVE PHYSICAL EDUCATION (3)**

Recognition of pupils with physical deviations, and use of special or modified physical education activities. Prerequisites: PHEC 311, BIOL 213-214.

### **KNES 526 MOTOR DEVELOPMENT: INFANTS TO ADULTS (3)**

Researching of literature in motor development and performance of the individual from infancy through adulthood. Impact of motor development on cognitive, affective and psychomotor development. Prerequisite: PSYC 201 Educational Psychology.

### **KNES 530 MOVEMENT EDUCATION IN THE ELEMENTARY SCHOOL (3)**

Application of problem solving and individualized methods of teaching of movement for the elementary school child. Development of program and materials for teaching creative dance, games and sports. Survey of current literature.

### **KNES 535 PROGRAMS IN OUTDOOR EDUCATION (3)**

Examines the varied programs in Outdoor Education offered within the state, nation, and selected foreign countries. Traditional and innovative programs will be reviewed. Concepts revealed will be contrasted and meeting educational objectives. Several field trips are required. Open to Education majors. Prerequisite: Six hours of physical education, recreation or education. Graduates: Degree in Physical Education.

### **KNES 541 THE AMERICAN WOMAN IN SPORT (3)**

Historical, physiological, psychological, sociological, and philosophical perspectives and societal attitudes toward women who participate in sport. Prerequisites: PSYC 101, SOCI 101 or WMST 231.

### **KNES 551 HISTORY OF AMERICAN SPORT (3)**

Explores sport in American society from a historical perspective. It includes major patterns of growth and role of sports in

American society. Emphasis is on methods of historical research and critical analysis of the discipline of sport history. Prerequisites: PHEC 299 or consent of instructor.

**KNES 555 PHYSICAL ACTIVITY PROGRAMMING FOR THE OLDER ADULT (3)**

Application of physiological, psychological, sociological, and motor learning principles to the development, professional and personal skills related to fitness assessment, exercise prescription, physical activity program planning and implementation. Prerequisite: PSYC 203 or consent of instructor.

**KNES 570-579 SELECTED TOPICS IN PHYSICAL EDUCATION (1-3)**

Workshop designed for study of special topics of current interest in physical education and athletics. Content varies and will focus on substantive material or operational problems. May be repeated for a maximum of six credits. Prerequisite: Consent of workshop director and/or graduate program director.

**KNES 594 TRAVEL STUDY (3)**

Study of selected physical education programs, practices, or facilities. Study group will be accompanied by TU Physical Education Department faculty member. Prerequisite: As specified in course outline and consent of instructor.

**KNES 596 INDEPENDENT STUDY (1-3)**

Course is designed to permit students to take courses which they cannot arrange within the regular semester schedule. All work will be under the direct supervision of an assigned faculty member. No more than 3 credits may be earned in independent study unless permission of the department chair is obtained.

**KNES 609 PSYCHOLOGY OF MOTOR LEARNING (3)**

Psychological factors affecting the acquisition of motor skills, emphasis on methodology. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

**KNES 611 SPORT PSYCHOLOGY (3)**

A data-based analysis of the behavioral consequences and antecedents of the sport experi-

ence. Investigation of current research in the field with attention to the research process. Experience with a research experiment in either a laboratory or field setting. Prerequisite: six hours of upper-division PHEC courses or consent of instructor.

**KNES 612 SIGNIFICANT PERIODS IN PHYSICAL EDUCATION (3)**

Influence of Greek, Roman, European, and English concepts of physical education upon the formation and development of American concepts of physical education. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

**KNES 613 ANALYSIS OF PHYSIOLOGICAL CONCEPTS (3)**

Analysis of research and laboratory application of the physiological factors that affect human efficiency before, during, and after exercise, such as: metabolism, circulation-respiration, muscular physiology, endocrine system, ergogenic aids, and environmental factors. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

**KNES 614 ANALYSIS OF TEACHING BEHAVIOR IN PHYSICAL EDUCATION (3)**

Review of research on teaching; analysis of components of the instructional process and the development of systematic observation and analysis of instruction. Prerequisite: Certification as a physical education teacher or appropriate experience in the field as determined by the program director.

**KNES 621 EDUCATIONAL GYMNAS-TICS (3)**

Theoretical and historical basis for problem-solving and individualized methods in teaching gymnastic movement. Prerequisites: Undergraduate major in physical education, and consent of graduate program director.

**KNES 630 MECHANICAL ANALYSIS OF MOVEMENT (3)**

Research and mechanical principles are analyzed relating to efficient human movement. Physical laws of leverage, motion, projectiles, gravity, buoyance, and equilibrium. Prerequisites: PHEC 311, under-

graduate degree in played education, Consent of graduate program director.

### **KNES 633 ADMINISTRATION AND SUPERVISION OF PHYSICAL EDUCATION (3)**

Administration and supervision of programs of physical education. Problems of personnel, program, facilities, and evaluation. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 639 CRITICAL ANALYSIS OF CURRENT LITERATURE IN PHYSICAL EDUCATION (3)**

Investigation and assessment of the physical education profession: contemporary leaders, books, journals, periodicals, projects, trends, issues, and innovations. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 641 EVALUATIVE TECHNIQUES IN PHYSICAL EDUCATION (3)**

Administration, assessment, and interpretation of measurements of classification indexes, power, agility, balance, flexibility, kinesthetic perception, speed and reaction time, strength, muscular endurance, cardiovascular conditions, and sport skills. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 645 FACILITIES AND EQUIPMENT FOR PHYSICAL EDUCATION (3)**

Principles of programming and planning facilities for physical education. Selection, purchase and care for equipment. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 651 COMPARATIVE PHYSICAL EDUCATION - CONTEMPORARY AND INTERNATIONAL (3)**

Analysis of patterns of physical education in selected countries throughout the world. Prerequisites: Undergraduate major in physical education and consent of graduate program director.

### **KNES 653 CONTEMPORARY PHYSICAL EDUCATION CURRICULUM (3)**

Aims, objectives, content, and methods in curriculum design for elementary and secondary school physical education. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 661 OUTDOOR LEISURE (3)**

Man and leisure in a changing society and their impact on the natural environment. Development of outdoor recreation and adventure skill interest, teaching and leadership techniques. Prerequisites: Undergraduate degree in physical education and consent of graduate program director.

### **KNES 663 CAMP ADMINISTRATION AND OUTDOOR EDUCATION (3)**

Organization and structure, personnel, program, site development, business management, food management, health and safety, public relations and evaluation in the modern outdoor education center or camp. Prerequisites: B.S. degree in recreation, physical education or education.

### **KNES 670-672 SELECTED TOPICS IN PHYSICAL EDUCATION (1-3)**

The course will focus on an in-depth study of selected topics in sport and physical education. Content will vary and will focus on current research and/or relevant sport and physical education concerns. The specific requirements are prerequisites will vary with each topic. Prerequisite: Approval by the department graduate program director.

### **KNES 685 RESEARCH SEMINAR (3)**

Research on a problem through consultation with designated faculty members. Prerequisites: EDUC 691, undergraduate degree in physical education and consent of graduate program director.

### **KNES 687 INTERNSHIP IN PHYSICAL EDUCATION (3)**

Supervised field experience appropriate to student's interests and background in selected school, business, agency or professional settings. Prerequisites: Minimum of 9 hours completed in graduate program, with a 3.0 G.P.A., and/or consent of department chairperson.

**KNES 696 INDEPENDENT STUDY IN PHYSICAL EDUCATION (3)** Supervised study of research problems and special projects in specified areas of physical education. Prerequisites: KNES 639 or KNES 641 and consent of graduate program director.

**KNES 697 DIRECTED READING IN PHYSICAL EDUCATION (3)** Extensive reading in selected areas of physical education. Prerequisites: KNES 639 or KNES 641 and consent of graduate program director.

## MANAGEMENT (MNGT) —————

**MNGT 561 TOTAL QUALITY MANAGEMENT (3)** Philosophy, principles, and applications of TQM in business. Prerequisites: MNGT 363/365 or graduate standing.

**MNGT 601 ADMINISTRATIVE THEORY AND PRACTICE (3)** Development of a framework for understanding and managing for organizational effectiveness, including the traditional areas of planning, organizing, staffing, directing and controlling. Other topics will include organizational behavior theory, alternate methods for decision-making and current management issues. This course is designed for student with no undergraduate exposure to management coursework. Prerequisite: Graduate standing.

**MNGT 602 CONFLICT RESOLUTION IN COMMERCE & INDUSTRY (3)** An exploration of the causes of conflict and various approaches to its resolution. Conflict at the interpersonal level as well as the organizational level is examined. The focus is on litigation avoidance and the alternative methods utilized in common disputes in a variety of industries. Prerequisite: Administrative Management (MNGT 601) and admission to a Graduate Degree Program.

**MNGT 603 HUMAN RESOURCE MANAGEMENT IN A GLOBAL ECONOMY (3)** Issues in managing human resources in companies operating both domestically and globally including functions required by law

and the marketplace. Prerequisite: Admission to a Graduate Degree Program.

**MNGT 604 LABOR RELATIONS (3)** The dynamics of labor and management relations, with emphasis on significance of dealing with unions and the realities of the constraints industrial relations place on the managerial decision making process. Topics include the development and recognition of union and collective bargaining and its impact on wages, hours, working conditions, employee relations and health safety. Current problems and issues are addressed. Prerequisite: Human Resource Management (MNGT 603 or MNGT 381) and graduate standing.

**MNGT 605 DECISION SUPPORT SYSTEMS (3)** Systems view of decision making. Concepts of artificial intelligence as applied to decision making, e.g. knowledge, human problem solving, knowledge engineering, reasoning and recognition, uncertainty. Concepts of problem solving models and model management. Concepts of idea management for group decision support. Prerequisite: Course(s) and/or work experience in information systems.

**MNGT 606 PROJECT MANAGEMENT (3)** Project management concepts. Economic analysis. Multiple-criteria evaluation methods. Organizational and work structure. Project technology structure. Project scheduling. Project budget, resource management and control. Computer support to project management. Emphasis is given to software project. Prerequisite: Undergraduate courses in Quantitative Techniques.

**MNGT 607 INFORMATION SYSTEMS MANAGEMENT (3)** Information resource requirements and strategies of businesses including information objective and design aspects, computer-based systems, telecommunications and data networks, systems analysis and design, artificial intelligence and decision support systems. Prerequisite: Graduate standing.

**MNGT 608 PROJECT MANAGEMENT (3)** Project management concepts. Economic analysis. Multiple-criteria evaluation methods.

Organizational and work structure. Technology structure. Scheduling, budget, resource management, and control. Computer support and software projects. Prerequisites: Undergraduate courses in Quantitative Techniques.

### **MNGT 609 BUSINESS & SOCIETY (3)**

An integrated view of the interrelationships between managing responsibility in a complex environment, stakeholders (the firm's many publics), corporate social performance, values and ethics in management including a process of moral reasoning for managers, business-government relations, crisis management, and managing corporate social performance. Prerequisites: Graduate standing.

### **MNGT 670-679 SPECIAL TOPICS IN MANAGEMENT (3)**

Contemporary business issues as they affect management practice. Content varies with each topic. Prerequisite: Consent of instructor.

### **MNGT 695 INDEPENDENT STUDY IN MANAGEMENT (3)**

Comprehensive paper on special topic in human resource management, organization behavior, or management. Prerequisites: 6 graduate semester hours in business and consent of instructor.

## **MARKETING (MKTG)**

### **MKTG 603 MARKETING ADMINISTRATION (3)**

The fundamental aspects of marketing functions, theory and strategy, including analysis of marketing opportunities; marketing research and forecasting; market segmentation; consumer motivation; product planning, price and distribution; sales force management and the role of marketing within the firm and society. Prerequisite: Graduate standing.

## **MASS COMMUNICATION (MCOM)**

### **MCOM 536 VIDEO AND FILMED EDITING (3)**

Theory and practice of post-production techniques to construct complex continuity sequences. Prerequisites: MCOM 367 or MCOM 371.

### **MCOM 550 PUBLIC OPINION AND THE PRESS (3)**

Journalistic aspects of public opinion and propaganda; the impact of mass communication media on the formation of public opinion. Techniques of polling and testing public opinion.

### **MCOM 551 PUBLIC RELATIONS FOR NON-PROFIT ORGANIZATIONS (3)**

A study of public relations in the non-profit organization. Fundraising, lobbying, working with volunteers, media relations, and the overall PR program will be studied. Course combines theory and practice. Contracts made with community non-profit organizations are the basis for practical experience lab sessions. Prerequisite: MCOM 353.

### **MCOM 553 PUBLIC RELATIONS CAMPAIGNS (3)**

Case studies and typical public relations problems in industry, labor, education, government, social welfare, and trade associations. Planning and preparation of communications materials for various media; application of public relations techniques. Prerequisites: MCOM 353 and MCOM 357, one of which can be taken concurrently with Public Relations Campaigns.

### **MCOM 559 PROFESSIONAL ISSUES IN PUBLIC RELATIONS (3)**

Technical, managerial, legal, ethical issues, emphasizing accreditation standards of professional associations. Prerequisite: Permission of instructor.

### **MCOM 560-569 PRACTICUM IN MASS COMMUNICATION (1-6)**

Provides students with valuable practical field experiences. Under faculty supervision the student works in an actual job setting with a working professional in a particular area of mass communication.

tions. Prerequisite: Completion of appropriate courses as determined by the department.

**MCOM 573 FILMMAKING III (3)** Professional film production techniques. Prerequisite: MCOM 367.

**MCOM 575 FILM WORKSHOP (3)** Designed primarily to provide experienced or future teachers with background about film so that they may better help pupils to become informed about and to develop critical reactions to the films they view. Prerequisite: Consent of instructor.

**MCOM 601 MEDIA WRITING (3)** Study of and practice in media writing techniques. Emphasis on style, structure, content and purpose. Prerequisite: Undergraduate degree in mass communication or MCOM 355 or MCOM 356 or MCOM 373 or equivalent.

**MCOM 603 CRITICISM IN MASS MEDIA (3)** Critical analysis of film and television with focus upon cultural, commercial, and aesthetic values that affect these media. Prerequisites: MCOM 363 or MCOM 364 or MCOM 364 or equivalent.

**MCOM 613 FREELANCE FEATURE WRITING (3)** Process of freelance writing for the print media. Prerequisite: MCOM 601 (may not be taken by those who have had WRIT 713).

**MCOM 615 ADMINISTRATIVE AND PROFESSIONAL COMMUNICATION (3)** Practices and problems within business and corporations, with emphasis on management-employee effectiveness, conflict management and resolution, and business communication formats. Prerequisite: MCOM 315 or equivalent.

**MCOM 617 INTERNATIONAL COMMUNICATION (3)** Media systems of the world compared relative to their political, cultural, sociological, economic, religious, historical and broadcasting and print structures. In-depth analysis of American global media efforts. Prerequisites: MCOM 201 and MCOM 355 or instructor's consent.

**MCOM 621 MASS MEDIA LAW & REGULATIONS (3)** Legal limits on freedom of the press Constitutional guarantees, libel, contempt, obscenity, privacy, ethical problems, the right to know. Origins and concepts of freedom of information and its evolution in constitutional law and judicial decisions: contemporary problems of censorship in publishing, broadcasting, and film.

**MCOM 625 WRITING FOR THE VISUAL MEDIA (3)** Scriptwriting for film, television, and related media. Prerequisite: MCOM 601.

**MCOM 631 RESEARCH METHODS IN MASS COMMUNICATION (3)** Development of quantitative and qualitative communication research designs. Prerequisite: PSYC 212 or Math 231 or equivalents.

**MCOM 633 THEORIES IN MASS COMMUNICATION (3)** Understanding the communicator, message, channel, audience, and effects components of Mass Communication. Prerequisite: MCOM 211.

**MCOM 635 JOURNALISM ETHICS (3)** Study of historical and contemporary ethical practices of American journalism. Prerequisite: MCOM 385 or equivalent.

**MCOM 651 MEDIA AND POLITICS (3)** Relationships between the mass media and the political system. The influence of the media on political careers, the adversary and support roles of the media. Prerequisite: Undergraduate degree.

**MCOM 670-679 SPECIAL TOPICS IN MASS COMMUNICATION (3)** Exploration of current media topics. Prerequisite: Varies with each topic.

**MCOM 680 SEMINAR IN MEDIA MANAGEMENT: BROADCAST STATION MANAGEMENT AND OPERATIONS (3)** Functions, advertising, network and labor relations, internal organizational structure and operational procedures of broadcast management. Philosophies and theories of manage-

ment, programming, audience research, budgeting and accounting principles, sales and regulatory functions. Prerequisites: MCOM 201, MCOM 261 or MCOM 265 or equivalent.

**MCOM 682 ISSUES MANAGEMENT (3)** Analysis of strategies used by organizations debating public policy. Prerequisites: MCOM 601 and MCOM 615.

**MCOM 684 NEWSPAPER MANAGEMENT (3)** Organization and administration of newspaper departments with consideration of legal concerns and the public trust. Prerequisite; Undergraduate degree in Journalism/Mass Communication or substantial professional experience in newspapers.

**MCOM 685 SEMINAR IN MEDIA PRODUCTION: PUBLIC RELATIONS (3)** Case studies and field investigations of strategies for researching, planning, implementing, and evaluating public relations campaigns. Prerequisites: MCOM 713.

**MCOM 686 SEMINAR IN MEDIA PRODUCTION: TELEVISION (3)** Aesthetic and technical aspects of multi-camera television studio production: camera operation and techniques, lighting and audio technical direction and producing. Prerequisite: MCOM 271.

**MCOM 687 SEMINAR IN MEDIA PRODUCTION: NEWSPAPERS (3)** Newspaper production and its relationship to other aspects of its operation. Traditional and new newspaper technology. Prerequisite: MCOM 601.

**MCOM 688 SEMINAR IN MEDIA PRODUCTION: FILM (3)** The examination of advanced 16mm filmmaking practice in both pre-production and post-production leading to the completion of a professional quality 16mm release print. Individual cost to the student will be determined by the selected student project. Prerequisites: MCOM 202, MCOM 267 and MCOM 367 or equivalent.

**MCOM 701 MEDIA INTER-RELATIONSHIPS (3)** Examination of the interactions among the mass media, including message-media systems. Prerequisite: MCOM 601.

**MCOM 713 PUBLIC RELATIONS THEORY (3)** Examination of the body of knowledge in public relations, including the scientific and humanistic literature in management, communication, and the social sciences. Prerequisites: MCOM 553 or equivalent, or consent of instructor.

**MCOM 715 SPECIALIZED REPORTING (3)** Developing expertise in the reporting of news in specific fields: e.g., urban affairs, science, the arts. Prerequisite: MCOM 601.

**MCOM 717 INTERNATIONAL FILM AND TELEVISION (3)** Examination of economic, social aesthetic, technological, and policy and issues. Current historical examples will be used. Prerequisite: MCOM 617.

**MCOM 781 INTERNSHIP IN JOURNALISM (3)** Supervised work in a professional journalistic setting. Prerequisites: MCOM 601, six additional MCOM graduate credits, and consent of instructor.

**MCOM 783 INTERNSHIP PUBLIC RELATIONS (3)** Supervised work in a professional public relations setting. Opportunity to relate theory and practice. Prerequisites: MCOM 685 or equivalent, six additional MCOM graduate credits, and consent of instructor.

**MCOM 785 INTERNSHIP IN FILM (3)** Supervised work experience within a professional filmmaking environment, exposing student to film production and scheduling. Prerequisites: MCOM 688 or equivalent, six additional MCOM graduate credits, and consent of instructor.

**MCOM 787 INTERNSHIP IN ELECTRONIC MEDIA (3)** Supervised work in a professional electronic media setting. Prerequisites: MCOM 686 or equivalent, six addi-

tional MCOM graduate credits, and consent of instructor.

**MCOM 795 INDEPENDENT STUDY IN MASS COMMUNICATION (3)** Directed study in production or research in selected areas through readings, projects, papers, and/or seminars. May be repeated for a maximum of six credits. Prerequisites: 15 credits of graduate level MCOM and/or COMM courses and consent of instructor.

**MCOM 897 GRADUATE PROJECT IN MASS COMMUNICATION (3)** Individual preparation and presentation of a project which applies theories and techniques in Mass Communication. Project must be approved, monitored, and evaluated by a graduate faculty member.

**MCOM 898 THESIS (6)** A carefully executed and accurate recording of a specific topic in Mass Communication. An acceptable research methodology must be utilized. Includes an outline of the proposed thesis submitted for approval to graduate advisor. Prerequisites: The student must be advanced to degree candidacy and have completed all of the required core courses.

**MCOM 899 THESIS CONTINUUM (1)**

## MATHEMATICS (MATH) \_\_\_\_\_

**MATH 501 HISTORY OF MATHEMATICS (3)** A historical survey of the classical roots of contemporary mathematics with selected topics chosen from number theory, geometry analysis, and algebra. (Major credit only toward secondary education concentration.) Prerequisites: MATH 263 and MATH 274.

**MATH 521 APPLICATIONS OF MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (3)** The course examines a series of applications of mathematics that may be used to enrich the secondary mathematics curriculum (No credit towards a mathematics major.) Prerequisite: Teaching experience in mathematics or science or consent of instructor.

**MATH 525 METHODS AND MATERIALS FOR MATH LAB INSTRUCTION (1-3)** Examination of and experiences with commercial and teacher-made materials designed for a laboratory (activity-centered) approach to learning mathematics. Prerequisite: A methods course in teaching mathematics (MATH 321, 323, 423) or previous teaching experience.

**MATH 527 READINGS IN MATHEMATICS EDUCATION FOR THE ELEMENTARY SCHOOL TEACHER (1-3)** Directed study for the teacher of elementary school mathematics. Prerequisites: MATH 321 or MATH 323 and approval of instructor. (No credit toward a mathematics major.)

**MATH 529 READINGS IN MATHEMATICS EDUCATION FOR THE SECONDARY SCHOOL TEACHER (1-3)** Directed study for the teacher of secondary school mathematics. Prerequisite: Consent of instructor. (No credit toward a mathematics major for arts and science students.)

**MATH 531 PROBABILITY (3)** Probability in sample spaces, discrete and continuous random variables, distribution theory. Tchebyshev's theorem, central limit theorem, expected values and moments. Prerequisite: MATH 274.

**MATH 532 MATHEMATICAL STATISTICS (3)** Sample theory and distributions, point estimation, confidence intervals, tests of hypothesis, regression, correlation and analysis of variance. Prerequisite: MATH 331.

**MATH 533 APPLIED REGRESSION AND CORRELATION ANALYSIS (3)** Relationships among variables emphasizing linear regression with one or more independent variables, methods of estimating parameters and testing hypotheses, selection of independent variables, and other topics. Prerequisite: One course in elementary statistics.

**MATH 534 NONPARAMETRIC STATISTICAL METHODS (3)** Applied study of popular nonparametric tests, procedures

utilizing data from a single sample and two or more independent and related samples; Chi-square tests of independence, homogeneity, and goodness-of-fit; rank correlation and other measures of association. Prerequisite: One course in elementary statistics.

### **MATH 535 NUMERICAL ANALYSIS I**

(3) Error analysis, interpolation, numerical differentiation and integration, numerical solution of algebraic equations and of systems of algebraic equations. Prerequisites: MATH 265 and MATH 274 and COSC 236.

### **MATH 536 NUMERICAL ANALYSIS II**

(3) Numerical solution of differential equations. Least squares and its applications, linear programming and extension of the concepts of MATH 435. Prerequisite: MATH 435. (Offered only in the spring semester of the academic year.)

### **MATH 537 OPERATIONS RESEARCH**

(4) Introduction to linear and integer programming; the simplex method and duality theory; dynamical formulation of deterministic decision process problems, applications to problems of equipment replacement, resource allocation and scheduling; Poisson and birth and death processes. Markovian queues. Prerequisites: MATH 265 and MATH 331.

### **MATH 538 LIFE CONTINGENCIES I**

(3) Theory and applications of contingency mathematics in the areas of life and health insurance, annuities and pensions from both the probabilistic and deterministic approaches. Prerequisite: MATH 331.

### **MATH 539 LIFE CONTINGENCIES II**

(3) Theory and applications of multiple life functions, multiple decrement models, valuation theory of pension plans, insurance models including expenses, nonforfeiture benefits and dividends. Prerequisites: MATH 438 or MATH 538.

### **MATH 543 APPLIED ANALYSIS OF VARIANCE**

(3) Single and multifactor models, inference for factor level means, multiple comparison methods for factor level means, test

of additivity, test of homogeneity, regression approach to analysis of variance. Prerequisite: MATH 333.

### **MATH 545 SAMPLING TECHNIQUES**

(3) Simple random, stratified, systematic, cluster and double sampling. Sampling for proportions, averages and totals and sample size determination. Prerequisite: One course in elementary statistics.

### **MATH 546 STATISTICAL METHODS IN QUALITY CONTROL**

(3) Statistical process control including principles of control charts, control charts for attributes and variables, and special control charts. Methods for quality improvement. Acceptance sampling including single, double, multiple and sequential attribute sampling, and acceptance sampling by variable. Prerequisite: One course in elementary statistics.

### **MATH 551 GRAPH THEORY**

(3) Hamiltonian and Eulerian graphs, coloring graphs, planar and non-planar graphs, connectivity problems and isomorphic graphs, and advanced topics. Prerequisite: MATH 265 or 267.

### **MATH 557 DIFFERENTIAL GEOMETRY**

(3) Curvatures of curves and surfaces in  $E^3$ , geodesics, invariants, mappings and special surfaces, Prerequisite: MATH 275.

### **MATH 563 LINEAR ALGEBRA**

(3) Vector spaces over arbitrary fields, linear transformations, eigenvalues, eigenvectors, inner products, bilinear forms, direct sum decompositions and the Jordan form. Prerequisites: MATH 265 and MATH 267.

### **MATH 567 THEORY OF NUMBERS**

(3) Theory of prime numbers, the division algorithm, the fundamental theorem of arithmetic, polynomials, congruences, number theoretic functions. Prerequisite: MATH 261 or MATH 263.

### **MATH 568 ALGEBRAIC STRUCTURES**

(4) Groups, rings, fields, integral domains, and polynomial rings. Prerequisites: MATH 265 and MATH 267.

**MATH 574 DIFFERENTIAL EQUATIONS (3)** Theory and application of linear ordinary differential equations. Solutions of non-linear ordinary differential equations of the first order. Prerequisite: MATH 274.

**MATH 575 MATHEMATICAL MODELS (3)** Consideration of some mathematical problems in sociology, psychology, economics, management science and ecology, and developing appropriate mathematical models and techniques to solve them.

**MATH 576 INTRODUCTORY REAL ANALYSIS (4)** An introduction to mathematical analysis. Sequence series, continuity, differentiation, integration and uniform convergence. Prerequisites: MATH 267 and MATH 275.

**MATH 577 COMPLEX ANALYSIS (3)** Complex number system, analytic functions, Cauchy's integral theorem and integral formula, Taylor and Laurent series, isolated singularities, Cauchy's residue theorem and conformal mappings. Prerequisite: MATH 275.

**MAP 578 TOPOLOGY (3)** Basic concepts of pointset topology, separation axioms, compact and connected spaces, product and quotient spaces, convergence, continuity and homeomorphisms. Prerequisites: MATH 267 and MATH 275.

**MATH 579 ADVANCED CALCULUS (3)** Vector, integral, and differential calculus including the divergence and Stoke's theorems. Fourier series, orthogonal functions and applications. Prerequisite: MATH 275.

**MATH 580-589 SELECTED TOPICS IN MATHEMATICS AND STATISTICS (1-4)** Topics will be chosen from different areas in mathematics and statistics. Content will be determined so as to complement course offerings as well as the needs and desires of the students. MATH 480 through MATH 483 may not be counted towards a mathematics major. Students may not accumulate more than

nine credit hours in Selected Topics. Prerequisites will vary from topic to topic.

**MATH 591 READINGS IN MATHEMATICS (1-3)** Independent reading in selected areas of mathematics. Prerequisite: consent of instructor. May be repeated for a maximum of six credits. (Open only to seniors.)

**MATH 621 SEMINAR IN TEACHING ARITHMETIC (3)** Analysis of new topics, techniques, and materials in arithmetic instruction. Students may not receive credit for both MATH 621 and MATH 422, except by special permission from the graduate program director and the chairpersons of the mathematics department. Prerequisite: MATH 321 or MATH 323.

**MATH 625 SEMINAR IN MATHEMATICS EDUCATION FOR SECONDARY SCHOOL TEACHERS (3)** An investigation of recent curricula, methods, and materials for secondary school mathematics instructors. Prerequisite: MATH 423 or equivalent.

**MATH 630 STATISTICS - AN INTEGRATED APPROACH (4)** Theory and practices of basic statistical analysis and inference with emphasis on analyzing and solving real problems using statistics. Descriptive statistics, introduction to probability, sampling distributions, estimation, hypotheses testing, regression, correlation, non-parametric techniques and analysis of variance, computer programming incorporate throughout. Prior knowledge of programming is not necessary. (Not open to those who have taken MATH 332.) Prerequisite: MATH 274.

**MATH 631 TOPICS IN PROBABILITY (3)** Review of basis probability theory, types of convergence and limit theorems, elementary stochastic processes. Markov chains, birth and death processes. Gaussian processes. Examples from engineering, physical and social sciences, management and statistics. Prerequisite: MATH 331.

**MATH 632 COMPUTATIONAL STOCHASTIC MODELING (3)** Computing

expectations and probabilities by conditioning. Markov chains: classification of states, limiting probabilities, gambler's ruin problems, algorithmic efficiency, branching process, time variable Markov chains, continuous-time Markov chains, birth and death processes, Kolmogorov differential equations, uninformatization. Renewal theory and its applications. Prerequisites: MATH 331 (or MATH 531), or consent of chairperson.

### **MATH 633 QUEUING SYSTEMS (3)**

Characterization and analysis of basic queuing systems, both single-server and multiple-server. the M/G/1 and G/M/m queuing systems. Multi-server with queuing, multi-server queuing rules, priority queues. Networks of queues: response time, routing, flow and congestion control. Manufacturing systems: capacity/inventory investment and scheduling. Prerequisites: MATH 331 (or MATH 531), or consent of chairperson.

### **MATH 634 COMPUTATIONAL SPECTRAL ANALYSIS AND TIME SERIES (3)**

Random processes, single and double exponential smoothing forecast methods, autoregressive moving average models, maximum likelihood estimation, minimum variance spectral estimation, maximum entropy, periodogram analysis. Computation of spectral estimates; the fast Fourier transform, Yule-Walker equations, Prony's method. Kalman and adaptive filtering. Mathematica or a similar software package will be used. Prerequisites: MATH 265 and MATH 332 (or MATH 532), or consent of chairperson.

### **MATH 635 APPLIED NUMERICAL ANALYSIS (3)**

Approximating functions, numerical solution of ordinary differential equations, numerical solution of partial differential equations, selected topics in numerical linear algebra such as orthogonal factorizations and least-square problems, singular value decomposition and pseudo-inverse, the Q-R algorithm of Francis for the eigenvalue problem. Mathematica or a similar software package will be used. Prerequisites: MATH 374 (or MATH 574) and MATH 435 (or MATH 535), or consent of chairperson.

### **MATH 636 LINEAR AND NONLINEAR PROGRAMMING (3)**

Formulations and model building in linear and nonlinear programming. The simplex method and its variants. Duality theory. Sensitivity analysis, parametric programming, convergence (theoretical and practical). Polynomial time algorithms. Optimality conditions for nonlinear optimization problems. Prerequisites: MATH 265 and MATH 275 and graduate standing, or consent of chairperson.

### **MATH 637 ADVANCED TOPICS IN APPLIED OPERATIONS RESEARCH (3)**

Dynamic programming, formulation of deterministic decision process problems, analytic and computational methods of solution, application to problems of equipment replacement, resource allocation, scheduling, search and routing. Brief introduction to decision making under risk and uncertainty. Prerequisites: MATH 275 and MATH 331 (or MATH 531), or consent of chairperson.

### **MATH 651 MATHEMATICS OF FUZZY LOGIC (3)**

Basic concepts of fuzzy logic, fuzzy sets, fuzzy uncertainty, fuzzy relations, comparing fuzzy logic with first-order predicate logic, algebra of fuzzy logic, approximate reasoning, rule-based systems. Description of linguistic data using fuzzy sets. Applications: rule-based expert systems, decision making, pattern recognition, control theory, optimization. Prerequisites: Graduate standing or consent of chairperson.

### **MATH 671 CHAOTIC DYNAMICS AND FRACTAL GEOMETRY (3)**

Introduction to the classical theory of linear systems and the modern theory of nonlinear and chaotic systems. Modeling of discrete and continuous time systems. Bifurcation theory, symbolic dynamics, fractals and complex dynamics, Julia sets and the Mandelbrot set. Mathematica or an equivalent software package will be used. Prerequisites: MATH 265 and MATH 275 and graduate standing or consent of chairperson.

### **MATH 673 APPLIED INDUSTRIAL MATHEMATICS I (3)**

Formulation and solution of mathematical problems for systems

from engineering, economics, physics, and the social sciences. Integral equations: theory, solutions, and approximations. Integral transforms and their applications: Fourier, Mellin, Hankel, Hilbert, Radon, and the z-transforms. Unitary transforms and their applications. Prerequisites: MATH 265 and MATH 374 (or MATH 574) and MATH 379 (or MATH 579) and MATH 475 or MATH 577). Or consent of chairperson.

**MATH 674 APPLIED INDUSTRIAL MATHEMATICS II (3)** A continuation of MATH 673. Topics include: calculus of variations, introduction to partial differential equations, asymptotic expansions, introduction to the wavelet transforms and their numerical treatment. Mathematica or a similar software package will be used in the numerical approximation of the problems investigated. Prerequisites: MATH 673.

**MATH 677 ADVANCED MATHEMATICAL MODELING (3)** Development of appropriate stochastic as well as deterministic models to solve applied mathematical problems in the fields of physics, engineering, and the social sciences. Topics include optimization models, dynamic models, probability models, and Monte Carlo simulation. Mathematica or a similar software package will be used. Prerequisites: MATH 331 (or MATH 531) and MATH 379 (or MATH 579), or consent of chairperson.

**MATH 695 INDEPENDENT STUDY IN MATHEMATICS (1-3)** Directed independent study in selected areas of graduate level mathematics. Prerequisites: Permission of instructor and graduate advisor. MATH 791-792 Master's Internship I, II (3,3) An original investigation of a problem to be pursued in cooperation with a local industry or business under the direction of an industry supervisor and a member of the mathematics faculty. Prerequisites: Completion of at least 15 graduate semester hours toward the M.S. degree in Applied and Industrial Mathematics and consent of chairperson.

## MUSIC (MUSC, MUED, MUSA) —

**MUSC 501 MUSIC PRIOR TO 1600 (3)** The art of music in the West from its tentative beginnings in Greek and Hebrew to the year 1600 A.D. Prerequisite: MUSC 301 or consent of instructor.

**MUSC 502 MUSIC OF THE BAROQUE PERIOD (3)** Study of the development of music style, forms and compositional techniques during the period from 1600 to about 1750. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 503 MUSIC FOR THE CLASSICAL PERIOD (3)** Styles, forms and techniques of the period from 1750-1820. Particular emphasis is placed on instrumental categories of the string quartet, sonata, symphony and concerto as illustrated in the works of Haydn, Mozart and Beethoven. Attention is given to operatic and sacred compositions of the same masters. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 504 MUSIC OF THE ROMANTIC PERIOD (3)** Musical styles, forms and techniques in the 19th century with special attention to the intellectual foundations of the Romantic movement. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 505 CONTEMPORARY MUSIC (3)** Styles, forms and musical techniques since 1900. Prerequisite: MUSC 302 or consent of instructor.

**MUSC 506 SURVEY OF SOLO VOICE LITERATURE (3)** A musical survey of the art-song from circa 1750 to the present. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 507 TONAL COUNTERPOINT (3)** A study of the polyphonic practices employed in 18th century tonal counterpoint. Prerequisite: MUSC 232.

**MUSC 508 MODAL COUNTERPOINT (3)** Analysis and writing of counterpoint in the style of Sixteenth Century masters such as Palestrina and Lassus. The approach of traditional species practice will be employed. Prerequisite: MUSC 232 or equivalent.

**MUSC 509 HISTORY AND LITERATURE OF GUITAR, LUTE, AND VIHUELA (3)** A survey of the history and literature written for or readily adaptable to the guitar. Includes study of tablatures and transcriptions to modern notation. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 510 SURVEY OF ORGAN LITERATURE (3)** A study of the literature of the organ from the beginnings of the Baroque Period to the present. Music covered will include that of the early Italian, French, and English schools; French Classical and North German Baroque; J.S. Bach and his followers; French & German organ music of the 19th Century and a survey of organ music for the 20th Century. Prerequisites: MUSC 102; MUSC 232 or consent of instructor.

**MUSC 511 SURVEY OF OPERA (3)** Study of opera literature of various periods and styles. Prerequisite: Junior or Senior standing or consent of instructor.

**MUSC 512 WIND ENSEMBLE (1)** Study and performance of advanced wind literature by a small band of selected instrumentalists. Audition required. Prerequisites: Audition and consent of instructor.

**MUSC 513 SYMPHONIC LITERATURE (3)** Survey of orchestral music from the Classical Era to the present. Includes symphony, overture, and symphonic poem. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 515 THE CONCERTO (3)** A survey of the concerto form from its inception to the present. Analysis of stylistic, formal, and compositional aspects will be included. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 517 PIANO LITERATURE (3)** A survey of piano literature from 1600 to the present. Primarily a lecture/demonstration course, but with assigned reading and assigned listening. Prerequisite: MUSC 232 or consent of instructor.

**MUSC 520 WORKSHOP IN MUSIC INSTRUMENT REPAIR (1)** The course offered during the period of the summer music camp will focus upon practical problems and methodology of instrument repair and maintenance. Items/activities of the course will include, but not be limited to: 1) identifying repair problems, 2) equipment necessary for repair, and 3) repair methodology. The course will also provide information concerning maintenance and avoidance of repairs. Prerequisite: Six semesters of applied music or equivalent.

**MUSC 521 AMERICAN MUSIC (3)** American music from the Colonial Period to the present. Prerequisite: Junior standing or consent of instructor.

**MUSC 527-528 JAZZ ARRANGING I, II (3, 3)** Study and practice of improvising in various jazz styles. Prerequisite: MUSC 231-232 or consent of instructor.

**MUSC 529-530 JAZZ IMPROVISATION I, II (3, 3)** Study and practice of improvising in various jazz styles. Prerequisite: MUSC 231-232 or consent of instructor.

**MUSC 531 ADVANCED CHORAL AND INSTRUMENTAL ARRANGING (3)** Advanced arranging techniques including the scoring of original and other works for various combinations of instruments and/or voices. Prerequisite: MUSC 335, or equivalent, or consent of instructor.

**MUSC 532 SEMINAR IN ADVANCED INSTRUMENTAL CONDUCTING AND INTERPRETATION (1)** Provides opportunity to study and discuss music literature and performance problems with nationally known conductors during the music camp. Music selected to be performed by the camp

participants will be examined and evaluated in terms of conducting techniques and interpretation. As a part of this process, students will be required to observe and evaluate camp performances. Prerequisite: MUSC 329 or equivalent and/or consent of instructor.

**MUSC 537 ADVANCED COMPUTER APPLICATIONS IN MUSIC (3)** Creative use of computer applications: sequencing, notation, synthesis applications, digital music recording, editing, synchronization with film/video. Prerequisites: MUSC 135.

**MUSC 571-579 SPECIAL TOPICS IN MUSIC LITERATURE (3)** Consideration of a central topic of Music Literature with a different topic selected each semester. May be reelected. Prerequisite: MUSC 232 and consent of instructor.

**MUSC 593 INDEPENDENT RESEARCH IN MUSIC LITERATURE (3)** Supervised research and musicological investigation of a selected topic culminating in a written senior thesis. May be repeated with credit. Prerequisites: MUSC 301, MUSC 302, and six hours of Advance Music History courses.

**MUSC 602 CONTEMPORARY JAZZ MUSIC (3)** Modern jazz styles and conventions: 1950 to the present; analysis of compositions and techniques of influential composers and performers. Prerequisite: Course is for graduate students only.

**MUSC 603 OPERA ORCHESTRA (1)** Study and performance of opera literature. May be repeated for credit. Prerequisite: Audition required.

**MUSC 604 ADVANCED JAZZ THEORY (3)** Jazz harmonic and melodic concepts; chord substitutions, extended and altered chords, and modal scales. Ear training using transcribed jazz solos, harmonies and rhythms. Prerequisite: course is for graduate students only.

**MUSC 605 JAZZ PERFORMANCE PRACTICES (3)** Performance in jazz idiom. Authenticity, style, and interpretation. Prerequisite:

uisite: Course is for graduate students only.

**MUSC 609 OPERA WORKSHOP (1)** Basic techniques of stage movement and related aspects of opera production. Musical and dramatic preparation of operatic scenes and roles. Participation in operatic scenes and performance. May be repeated for credit. Prerequisite: Audition required.

**MUSC 613 CLARINET CHOIR (1)** Study and performance of clarinet choir literature. May be repeated for credit. Prerequisite: Audition required.

**MUSC 615 MARCHING BAND (1)** Performance of a variety of marching band literature as well as various styles of marching techniques. May be repeated for credit. Prerequisite: Audition required.

**MUSC 617 MEN'S GLEE CLUB (1)** Study and performance of choral literature written and arranged for male voices. May be repeated for credit. Prerequisite: Audition required.

**MUSC 618 WORKSHOP IN CLASS PIANO PEDAGOGY (2)** Designed as a one-week summer workshop, this course will offer practical training to class piano teachers. Emphasis will be placed on organization of course content, application of effective group piano teaching methods, and the selection of teaching materials. Class activities will include the development of instructional techniques in the Wurlitzer piano laboratory. Prerequisite: One year of private or class keyboard study or consent of instructor.

**MUSC 621 PERSPECTIVES IN MUSIC HISTORY (3)** An examination of important issues in the history of western music focusing on the philosophies of music historians, the evolution of pertinent genres and forms, the social background to musical practice, and recent developments in musical scholarship. Prerequisite: Admission to Master of Music degree program.

**MUSC 629 CONCEPTS OF MUSIC THEORY (3)** The theoretical and analytical

principles of tonal music. Emphasis on writing and listening skills. Prerequisite: Graduate standing.

### **MUSC 631 ADVANCED THEORY (3)**

Continued development of skills in more advanced melodic, harmonic and rhythmic aspects of music through hearing, playing and writing. Prerequisite: MUSC 232.

### **MUSC 633 ADVANCED WOODWINDS (DOUBLE REEDS) (3)**

Study of advanced techniques on bassoon and oboe. Special emphasis given to reed-making and instrument repair. Prerequisite: MUSC 223 or consent of instructor.

### **MUSC 637 WIND ENSEMBLE (1)**

Study and performance of advanced wind literature by a small band of selected instrumentalists. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 639 GUITAR ENSEMBLE (1)**

Study and performance of guitar ensemble music. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 640 MUSIC COMPOSITION (3)**

Analysis and discussion of works of major composers. Writing of original compositions in vocal and instrumental idioms. Prerequisites: MUSC 232, MUSC 335, MUSC 435.

### **MUSC 641 BRASS ENSEMBLE (1)**

Study and performance of advanced brass literature. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 643 MUSICAL THEATRE ORCHESTRA (1)**

Study and performance of musical theatre literature. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 645 PERCUSSION ENSEMBLE**

(1) Study and performance of advanced percussion literature; supplement and improve the percussion student's musical training by acquainting the student with the various techniques involved in performing on the numer-

ous percussion instruments. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 647 SAXOPHONE ENSEMBLE**

(1) Study and performance of advanced saxophone ensemble music. May be repeated for credit. Prerequisite: audition required.

### **MUSC 649 CHAMBER ENSEMBLE (1)**

Study and performance of chamber music. Open to all instrumental students by audition. Required of all students concentrating in string instruments. May be repeated for credit. Prerequisite: Audition.

### **MUSC 651 VOICE ENSEMBLE (1)**

Small group study and performance for advanced choral literature. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 653 WOODWIND ENSEMBLE**

(1) Study and performance of advanced woodwind literature. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 655 CHORAL SOCIETY (1)**

Study and performance of advanced choral literature. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 657 JAZZ ENSEMBLE (1)**

Study and performance of music of the jazz idiom. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 659 EARLY MUSIC ENSEMBLE**

(1) Study and performance of Baroque, Renaissance, Medieval literature. Open to vocalists and performers of early instruments such as recorder, viol, harpsichord, sackbut, flute, oboe, violin, cello, bassoon, guitar, vielle, lute, medieval harp, and crumhorn. May be repeated for credit. Prerequisite: Audition required.

### **MUSC 661 CHAMBER SINGERS (1)**

The study and performance of choral literature written and suitable for a small (15-20) chorus. May be repeated for credit. Prerequisite: Audition required.

**MUSC 663 UNIVERSITY CHORALE**

**(1)** Study and performance of advanced choral literature. May be repeated for credit. Prerequisite: Audition required.

**MUSC 665 WOMEN'S CHORUS (1)**

Study and performance of choral literature for female voices. May be repeated for credit. Prerequisite: Audition required.

**MUSC 667 ORCHESTRA (1)**

Study of orchestral literature. May be repeated for credit. Prerequisite: Audition required.

**MUSC 669 SYMPHONIC BAND (1)**

Study and performance of advanced wind and percussion literature by a large band of selected instrumentalists. Personnel to be determined by balanced instrumentation. May be repeated for credit. Prerequisite: Audition required.

**MUSC 670-679 SPECIAL TOPICS IN MUSIC (3)**

In-depth study of a selected topic in music. Specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Approval by the graduate advisor is required. Each topic may be taken as a separate course.

**MUSC 671 SPECIAL TOPICS IN MUSIC LITERATURE (3)**

Consideration of a central topic of Music Literature with a different topic selected each semester. May be repeated. Prerequisite: MUSC 232 and consent of instructor.

**MUSC 685 MUSIC BIBLIOGRAPHY AND RESEARCH (3)**

Investigation of music bibliography, research methodology, and the writing process, Independent research projects and experience in writing research papers, reviews, and essays in musical criticism.

**MUSC 797 GRADUATE RECITAL (1)**

Recital performance for Master of Music graduation requirement. Prerequisites: A minimum of 24 credits must be completed toward the degree and permission of the graduate program director.

**MUSC 897 GRADUATE PROJECT IN MUSIC (1)**

Fulfills a graduation requirement for Master of Science in Music Education. Projects include recital, composition, research paper, or practicum as appropriate to the needs and interest of the student. Prerequisites: A minimum of 21 graduate credits must be completed and permission of the graduate program director in Music Education.

**MUSC 898 MASTER'S THESIS IN MUSIC (6)****MUSC 899 THESIS CONTINUUM (1)****MUSIC APPLIED (MUSA) —————****MUSA 671-672 BRASS PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester hour. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 673-674 PIPE ORGAN PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 675-676 PERCUSSION PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 677-678 PIANO PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 679-680 STRING PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 681-682 VOICE PRIVATE LESSONS (1-3)**

Fee of \$85.00 per semester credit. One half-hour lesson per week. May

be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 683-684 WOODWIND PRIVATE LESSONS (1-3)** Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 685-686 GUITAR PRIVATE LESSONS (1-3)** Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 687-688 COMPOSITION PRIVATE LESSONS (1-3)** Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

**MUSA 689-690 HARPSICHORD PRIVATE LESSONS (1-2)** Fee of \$85.00 per semester credit. One half-hour lesson per week. May be repeated for further credit. Prerequisite: Consent of department chairperson.

## MUSIC EDUCATION (MUED) —

**MUED 519 WORKSHOP: ASPECTS OF STRING TEACHING (2-6)** An extension course to be offered at various locations. The workshop includes private lessons, master classes, supervised laboratory experiences, as well as concerts, lectures and rehearsals designed to enrich the experience of string teachers and those interested in becoming public school string teachers. Sessions will vary in length from one to six weeks with appropriate credit awarded according to course requirements and contact hours. Prerequisite: Fulfillment of all requirements for teacher certification in instrumental music and consent of instructor.

**MUED 601 CURRENT TRENDS IN MUSIC AND MUSIC EDUCATION (3)** Current philosophies and objectives of music scope and sequence of music curricula (vocal

and instrumental) in the schools. Prerequisite: Consent of department chairperson.

**MUED 603 MUSIC IN SPECIAL EDUCATION (3)** Musical curriculum materials and activities addressing the needs of handicapped students in school settings. Teacher skill development in adapting lesson plans, developing Individual Education Programs and program implementation. Prerequisite: MUED 307, MUED 309 or permission of chairperson.

**MUED 605 SEMINAR IN COMMUNITY MUSIC (3)** Exploration of the teaching and performance of music in diverse settings: community music schools, retirement communities, pre-school/home school settings, workplace performance groups, intergenerational settings and community based ensembles. Includes philosophy, pedagogy, and practical issues such as funding as well as aspects of adult and intergenerational learning. Prerequisites: Bachelor's degree in music or music education.

**MUED 617 CHORAL WORKSHOP IN ELEMENTARY AND SECONDARY SCHOOL MUSIC (2)** Observation, conducting and evaluation of rehearsals of the chorus made up of workshop participants. Includes sources and selection of music, audition and classification of voices, pedagogy, rehearsal techniques, choral arranging, and program building and programming. Prerequisite: MUSC 327.

**MUED 621 WORKSHOP: TEACHING GUITAR IN THE CLASSROOM (2)** Basic performance technique, visualization, repertoire, guitar pedagogy, curriculum development, and performance analysis. Students observe, evaluate, and participate in laboratory class instruction. Prerequisite: MUED 307 or consent of instructor.

**MUED 630 DALCROZE-ORFF-KODALY FOR THE CLASSROOM I (2)** Principles of Dalcroze eurhythmics, Orff and Kodaly techniques in elementary and middle school programs. Appropriate for vocal-general and in-

strumental teachers. Prerequisite: Bachelor's degree in Music or Music Education.

**MUED 631 DALCROZE-ORFF-KODÀLY FOR THE CLASSROOM II (2)** Principles of beginning and intermediate level Dalcroze, Orff and Kodàly techniques in the vocal-general and instrumental music program exploring practical techniques and materials using an eclectic approach to teaching concepts and skills. Prerequisite: MUED 630 or consent of instructor.

**MUED 632 DALCROZE PRACTICES (2)** Methods and materials incorporating eurhythmics, solfege, improvisation and basic keyboard improvisatory skills. Prerequisite: MUED 630 or consent of instructor.

**MUED 633 ORFF TECHNIQUES (2)** Methods and materials incorporating improvisation, orchestration, mallet technique, speech chants, movement and using Orff instruments. Prerequisite: MUED 630 or consent of instructor.

**MUED 634 KODÀLY TECHNIQUES (2)** Methods and materials incorporating sight singing exercises, rhythm and movement, folk songs and singing games within an eclectic curriculum. Prerequisite: MUED 630 or consent of instructor.

**MUED 635 THEORY, PEDAGOGY AND CURRICULUM DEVELOPMENT IN DALCROZE, ORFF, KODÀLY (3)** Teaching the pedagogy of musical elements and concepts using Dalcroze, Orff and Kodàly techniques and materials. Prerequisite: MUED 631, MUED 632, MUED 633, MUED 634, or consent of instructor.

**MUED 639 ADVANCED WORKSHOP IN ELEMENTARY AND JUNIOR HIGH SCHOOL GENERAL MUSIC (2)** Observation, development and evaluation of current materials and methodology in elementary and junior high school general music. Prerequisite: MUED 307, MUED 309 or equivalent.

**MUED 661 SEMINAR IN INSTRUMENTAL MUSIC (3)** Comparative analysis of current methods and materials used in schools and colleges. Instrumental conducting and repertoire. Construction of acoustical properties and basic techniques of instruments. Problems of ensemble and balance. Intonation, precision and interpretation are studied. Materials and music literature for bands, orchestras and small ensembles are evaluated. Prerequisite: Admission to graduate program.

**MUED 662 SEMINAR IN CHORAL (VOCAL) MUSIC (3)** Comparative analysis of current methods and materials used in schools and colleges. Choral conducting and repertoire. Style interpretation, tone quality, diction, rehearsal and conducting techniques are analyzed. Prerequisite: consent of department chairperson.

**MUED 670-679 WORKSHOPS IN MUSIC EDUCATION (1-3)** Selected topics in music education. Can be repeated for credit when topics differ. Prerequisite: Graduate standing.

**MUED 695 RESEARCH METHODS IN MUSIC EDUCATION (3)** The application of research to problems in the field of music education. Prerequisites: Admission to the graduate program in Music Education and consent of instructor.

## OCCUPATIONAL THERAPY (OCTH) —————

**OCTH 528 OCCUPATIONAL THERAPY ORGANIZATIONS IN MODERN SOCIETY (3)** Examination of occupational therapy organizations in health care delivery systems within broad technological societal and economic contexts. Course emphasizes management and administration of occupational therapy service programs as they are impacted by changes in health care technology and social attitudes towards health. Prerequisites: OCTH 213, HLTH 207.

**OCTH 570-579 SPECIAL TOPICS IN OCCUPATIONAL THERAPY (1-3)** Designed to explore topics of special interest in the theory and practice of occupational therapy. Prerequisite: consent of instructor. May be repeated for a maximum of three credits.

**OCTH 601 THEORY AND PRACTICE OF PSYCHOSOCIAL OCCUPATIONAL THERAPY (3)** Psychosocial theories underlying the practice of occupational therapy; current and projected models of clinical practice. Prerequisite: Permission of instructor.

**OCTH 603 ISSUES IN OCCUPATIONAL THERAPY (3)** Analysis of current issues in occupational therapy. Prerequisite: Admission to Occupational Therapy master's program.

**OCTH 604 ACADEMIC AND CLINICAL EDUCATION (3)** College/University teaching and clinical supervision strategies for the preparation of professionals in clinical discipline. Prerequisite: Consent of instructor.

**OCTH 605 MANAGING HUMAN RESOURCES IN OCCUPATIONAL THERAPY (3)** Issues and trends: in leadership, decision-making styles, productivity, professional development recruitment and retention, and performance appraisal systems. Prerequisite: Consent of instructor.

**OCTH 606 MANAGING OCCUPATIONAL THERAPY SERVICES (3)** Organizational principles and managerial strategies include quality assurance, financial management, third party reimbursement, marketing and strategic planning. Prerequisite: Consent of instructor.

**OCTH 611 ADVANCED OCCUPATIONAL THERAPY THEORY AND PHILOSOPHY (3)** Theory and philosophy of occupational therapy. Prerequisite: Admission to Occupational Therapy master's program.

**OCTH 613 ADVANCED RESEARCH METHODS IN OCCUPATIONAL THERAPY (3)** Examination of exploratory, descriptive survey, and experiential research methods as they have and can be used in occupational therapy. Prerequisites: Admission to the master's degree program; OCTH 611 and PSYC 687 or concurrently with these courses; consent of department.

**OCTH 621 GERIATRIC REHABILITATION (3)** Older adult assessment and rehabilitation within a variety of health care systems. Prerequisite: Consent of instructor.

**OCTH 623 ASSESSMENT IN PEDIATRIC OCCUPATIONAL THERAPY (3)** Theory and practice of evaluation in the area of pediatric Occupational Therapy. Prerequisite: Consent of instructor.

**OCTH 625 ASSESSMENT AND TREATMENT OF THE ADULT WITH CENTRAL NERVOUS SYSTEM DYSFUNCTION (3)** Investigation of current theories of occupational therapy assessment and intervention strategies used in adult central nervous dysfunction. Prerequisites: OCTH 611 and 513 and consent of instructor.

**OCTH 627 ASSESSMENT AND TREATMENT OF THE ADULT WITH BIOMECHANICAL DYSFUNCTION (3)** Investigation of current theories of occupational therapy assessment and intervention strategies used in adult biomechanical dysfunction. Prerequisites: OCTH 611 and 613 and consent of instructor.

**OCTH 631 COMMUNITY GERONTOLOGY (3)** Planning and consulting for adult community programs. Prerequisite: OCTH 611 and consent of instructor.

**OCTH 633 OCCUPATIONAL THERAPY TREATMENT IN PEDIATRICS (3)** Advanced treatment principles for developmental disabilities from the neurodevelopmental viewpoints, including provisions for care of children in health delivery systems including the school. Prerequisite: OCTH 623.

**OCTH 670-679 SPECIAL TOPICS IN OCCUPATIONAL THERAPY (1-3)** Study of selected topics in Occupational Therapy. Prerequisites: Vary with each topic, consent of instructor.

**OCTH 691 DIRECTED READINGS IN OCCUPATIONAL THERAPY (1-3)** Guided review of literature to explore in-depth subjects related to occupational therapy theory and practice. Prerequisite: Graduate standing.

**OCTH 781 GRADUATE SEMINAR IN OCCUPATIONAL THERAPY (3)** Graduate project of thesis proposal preparation with feedback and discussion. Prerequisite: Admission to occupational therapy master's degree program, PSYC 687, and consent of department.

**OCTH 791 INDEPENDENT STUDY (1-6)** In-depth investigation specific to area of concentration. Prerequisites: Admission to graduate program in Occupational Therapy and consent of instructor.

**OCTH 897 GRADUATE PROJECT IN OCCUPATIONAL THERAPY (3)** Implementation and documentation of a project designed in OCTH 781 which is oriented toward the application of specific techniques in occupational technology. Prerequisites: OCTH 781, successful completion of the graduate examination and consent of project advisor.

**OCTH 898 THESIS (6)** Original investigation using an acceptable research method and design conducted under the direction of a faculty member. Prerequisites: OCTH 781, successful completion of the graduate examination and consent of thesis chairperson.

**OCTH 899 THESIS CONTINUUM (1)**

## PHILOSOPHY AND RELIGION (PHIL)

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**PHIL 501 PHILOSOPHIES OF INDIA (3)** Examination of major ideas in the Vedic, Epic, Classical darsana, and modern periods. Prerequisite: One lower level course in philosophy or consent of instructor.

**PHIL 502 PHILOSOPHIES OF CHINA AND JAPAN (3)** Examination of some major philosophical systems through selected writings in translation. Prerequisite: One lower level course in philosophy or consent of instructor.

**PHIL 505 ARCHAEOLOGY OF PALESTINE AND TRANSJORDANIA (3)** A study using audio-visual aids of the aims, techniques and artifacts of biblical archaeology. Research exercises may require the use of museums, collections and libraries. Prerequisite: One previous course in philosophy or religion.

**PHIL 509 AESTHETICS (3)** An analytical and historical examination of concepts of the nature of art, beauty, aesthetic value, aesthetic perception, and of the modes of existence of artifacts. Prerequisite: One lower-division course in philosophy.

**PHIL 511 ETHICS (3)** Analysis of readings from the principle classical and contemporary ethical sources, study of the basic moral concepts as found in these sources; application to contemporary moral concerns. Prerequisite: One lower-division course in philosophy.

**PHIL 513 PHENOMENOLOGY (3)** An examination of phenomenology as both a philosophical method and philosophical position. Themes to be considered include consciousness, the body, time and the experience of others. Primary course readings in the works of Husserl, Heidegger, Sartre, Merleau-Ponty. Prerequisite: Six credits in philosophy.

**PHIL 517 EXISTENTIALISM (3)** Some of the major existentialist philosophers will be studied, e.g., Kierkegaard, Nietzsche, Heidegger, Sartre, Beauvoir. The philosophi-

cal themes of transcendence, the absurd, estrangement and anxiety will be considered. Prerequisite: Six credits in philosophy.

**PHIL 522 HELLENISTIC AND MEDIEVAL PHILOSOPHY (3)** This course will deal with the philosophical schools of the Hellenistic and Roman periods, viz., Stoicism, Epicureanism, Scepticism and Neo-Platonism and with the two main Christian philosophies of the Middle Ages, viz., Augustinianism and Thomism. Prerequisites: One lower-division course in philosophy.

**PHIL 524 MODERN PHILOSOPHY (3)** The history of philosophy beginning with Descartes through the 19th century. Prerequisite: One lower-division course in philosophy.

**PHIL 525 SCHOOLS OF CONTEMPORARY PHILOSOPHY (3)** A survey with varying emphasis on a number of such contemporary philosophical positions as pragmatism, phenomenology, logical positivism, the analysts, neo-Aristotelianism, the philosophers of science, and the existentialists. Prerequisite: One lower-division course in philosophy.

**PHIL 526 AMERICAN PHILOSOPHY (3)** The history of the main currents of American philosophical thought as exemplified in such writers as Edwards, Emerson, Pierce, James, Royce, Dewey and Whitehead. Prerequisite: One lower-division course in philosophy.

**PHIL 531 CONCEPTS OF WOMAN: A HISTORICAL APPROACH (3)** Various concepts which philosophers have used to define woman. A historical survey approach, with readings from Plato, Aquinas and others, and ending with Beauvoir. Prerequisite: One lower-division course in philosophy.

**PHIL 533 CONTEMPORARY ETHICAL PROBLEMS (3)** The course will treat the meaning of moral experience and the moral problems which arise in connection with human sexual integrity, ownership of property,

welfare, violence, civil disobedience, punishment, War, and truth telling in social relations and government. Prerequisite: One lower-division course in philosophy.

**PHIL 539 THEORY OF KNOWLEDGE (3)** An historical and systematic approach to the truth value and elements of the forms of human knowledge. The theories of major philosophers will be studied. Prerequisite: One lower-division course in philosophy.

**PHIL 540-549 PHILOSOPHICAL SYSTEMS (3)** The study of a major philosophical system or position, classical or modern, and of its important proponents. Prerequisite: Two previous courses in philosophy.

**PHIL 551 PHILOSOPHY OF RELIGION (3)** Exposition of various approaches to the philosophy of religion with an analysis of the major issues on which they differ and agree. Prerequisite: Two previous courses in philosophy or religion.

**PHIL 554 INTERPRETATIONS OF THE BIBLE: OLD TESTAMENT (3)** Major themes of the Biblical Literature, and of its religious, philosophical and cultural implications. Prerequisite: One lower-division course in philosophy or religion.

**PHIL 555 INTERPRETATIONS OF THE BIBLE: NEW TESTAMENT (3)** Major themes of the Biblical Literature, and of its religious, philosophical and cultural implications. Prerequisite: One lower-division course in philosophy or religion.

**PHIL 557 COMPARATIVE RELIGION (3)** Study of a number of the world's major religious traditions emphasizing specific philosophical and psychological problems encountered therein. Prerequisite: At least one lower-division course in philosophy, religion or history.

**PHIL 561 ETHICS OF MEDICINE AND THE LIFE SCIENCES (3)** A search for guidelines in such moral problems as abortion, the care of the dying, organ transplants, in-

formed consent in therapy and experimentation, adequate health care and its just distribution, control of human behavior by drugs, surgery, etc., test-tube reproduction, population control, genetic engineering and counseling. Prerequisite: One lower-division course in philosophy or consent of instructor.

**PHIL 563 BUSINESS ETHICS (3)** Economics is one of the “moral sciences” in so far as it deals with an important sphere of human activity which intends a good. This course will institute a philosophical reflection on economic ideas as they appear in the three main categories of opinion, viz., conservative, liberal and radical. Attention will be drawn to the epistemological, ethical and metaphysical presuppositions of these traditions. Prerequisite: One lower-division course in philosophy.

**PHIL 570-579 PHILOSOPHICAL PROBLEMS (3)** A consideration of one of the perennial interest of philosophy. Prerequisite: Two previous courses in philosophy.

**PHIL 580-589 PHILOSOPHICAL TOPICS (3)** Courses offered under this title will be of variable content. Topics of traditional philosophical interest or of philosophical problems in other areas of knowledge or of contemporary interest will be offered. Prerequisite; One lower-division course in philosophy.

## PHYSICAL SCIENCE (PHSC) —————

**PHSC 501 ADVANCED LABORATORY IN PHYSICAL SCIENCE (2)** Exacting laboratory work of an advanced nature under the guidance of the Physical Science Department staff. Each student will present and defend his work at a seminar. May be repeated for a maximum of six credits. Prerequisite: Consent of instructor.

**PHSC 503 EARTH-SPACE SCIENCE (3)** Physical science principles applied in the study of earth and space. Emphasis on experimental and discovery approaches. Prerequisites: PHSC 101.

**PHSC 505 FUNDAMENTAL CONCEPTS IN THE EARTH SCIENCES (3)** Principles of astronomy, geology and related earth sciences. Methods of investigation employed by earth scientists. Observations in the planetarium and field studies in the Baltimore area. Two lecture hours and one two-hour laboratory period. No credit allowed if student has taken PHSC 161 and/or PHSC 121. Prerequisite: PHSC 101 or equivalent.

**PHSC 511 PHYSICAL SCIENCE FOR TEACHERS (3)** An in service course for teachers in the elementary and/or junior high school designed to develop physical science concepts. Emphasis will be placed on developing these concepts through laboratory work. Prerequisite: Teaching experience.

**PHSC 521 STRUCTURAL GEOLOGY (4)** Description and interpretation of shape and internal fabric of deformed rock bodies and analysis of mechanics by which they were deformed. Prerequisites: PHSC 121 and PHSC 211 or 221.

**PHSC 551 PETROLOGY OF SEDIMENTARY ROCKS (3)** Macro-and microscopic analysis of sedimentary rocks. Classifications and diagenetic processes. Offered spring semester alternate years. Prerequisite: PHSC 443.

**PHSC 594 TRAVEL STUDY (1-3)** A detailed investigation of field problems and phenomena. Locations and topics to be selected by the department and instructors sponsoring program. May be repeated for maximum of three credits. Prerequisites: Consent of instructor.

**PHSC 595 COURSE RESEARCH IN 500-LEVEL COURSES (1)**

## PHYSICS (PHYS) —————

**PHYS 504 HISTORY AND PHILOSOPHY OF PHYSICS (2)** The works of Sarton, Cohen, Singer and Dampier on the history and significance of physical concepts. The philosophical concepts of Bridgeman, Russell,

Heisenberg and other contemporaries interpreted in the historical development. Two lecture hours.

**PHYS 507 INTRODUCTORY MATHEMATICAL PHYSICS (3)** As the mathematical maturity of the students will allow, selected topics will be examined such as the generalized expressions for forces and potentials, vector analysis, applications of Fourier series and complex variables, and solutions of the harmonic oscillator and wave equations. Three lecture hours. Prerequisite: PHYS 222 or PHYS 212, MATH 373 or concurrently.

**PHYS 509 MATHEMATICS OF MOTION (4)** This course, intended to meet the needs of mathematics major students, illustrates the application of mathematics to major physical phenomena: the particle and wave nature of motion. The methods developed are applicable to both the macrocosm and microcosm. Prerequisites: COSC 235, MATH 273 and MATH 274.

**PHYS 511 MODERN PHYSICS (4)** Special relativity, the quantum theory, atomic structure and spectra, and nuclear structure and reactions are the main topics covered by the course. Other topics which may be covered involve molecular, solid state, and high energy physics. Four lecture hours. Prerequisite: MATH 274, PHYS 212, or PHYS 222.

**PHYS 533 BASIC ELECTRONICS (4)** Circuit components, characteristics of semiconductors, electrical measurements, method of circuit analysis, electronic devices. Three lecture hours and one three-hour laboratory period. Prerequisite: PHYS 212 or PHYS 222 or consent of instructor.

**PHYS 534 DIGITAL ELECTRONICS (4)** Subjects covered will be basic concepts of digital electronics such as: gates, logic modules, truth tables, digital codes, sequential systems, semi-conductor memories, decade counters, etc. The laboratory program is designed to give students firsthand experience on the material covered in lecture using integrated cir-

cuits and LED display systems. Two hours lecture, three hours laboratory. Prerequisite: MATH 115 or equivalent.

**PHYS 535 ELECTRONICS (3)** Principles of transistors with emphasis on their design and construction and an introduction to logic circuits. Two lecture hours and one two-hour laboratory. Prerequisites: PHYS 305, PHYS 335.

**PHYS 537 INTRODUCTION TO MICROPROCESSOR-BASED DIGITAL SYSTEMS (3)** An introductory course on basic microcomputer concepts. Topics covered include basic structure and organization of microcomputers, digital logic design, assembly language programming, memory elements, and applications. Hardware oriented experiments will be conducted providing practical experience in interfacing the microcomputer to a variety of instruments and input-output devices. Two hours lecture and two hours laboratory. Prerequisite: PHYS 337.

**PHYS 541-542 INTERMEDIATE PHYSICS LABORATORY, I, II (3, 3)** First Semester: The measurement of several fundamental physical constants. Exploration of classical and modern research methods: Lasers, holography, optical and nuclear spectroscopy. Second Semester: Several advanced experiments, a research project. Familiarization with machine shop procedure, vacuum and other experimental techniques. Five laboratory hours. Prerequisite: PHYS 311 or concurrently. (Lab II Prerequisite: PHYS 341).

**PHYS 545 LASERS & HOLOGRAPHY (3)** The wavefront-reconstructions, laser theory, the properties and making of holograms, and the applications of lasers and holography will be covered. Special projects will be assigned to students depending upon their individual theoretical and experimental backgrounds. Prerequisite: PHYS 222 or consent of instructor.

**PHYS 550 MECHANICS (4)** Systems of coordinates and transformations, kinematics, Newtonian dynamics, linear systems and oscil-

lators, central force motion, generalized coordinates, and Lagrange's equations. Optional topics: Hamiltonian principle, perturbation techniques, non-linear behavior, coupled oscillations. Four lecture hours. Prerequisites: PHYS 222 or PHYS 212, MATH 274.

**PHYS 551 MECHANICS II (4)** Continuation of PHYS 301. Inertia and stress tensors; continuum mechanics; rotation of a rigid body; theory of small vibrations; basic postulates of the special theory of relativity; relativistic dynamics; lattice vibrations. Other special topics of advanced mechanics. Prerequisites: PHYS 351 and PHYS 307.

**PHYS 552 THERMODYNAMICS AND KINETIC THEORY (3)** Principles and laws of classical thermodynamics applied to simple irreversible processes, including chemical, elastic, electric and magnetic phenomena; thermodynamic functions and Maxwell's relations; the conservation equations in elementary kinetic theory; fluctuations; and irreversible transfer effects. This course may be taken concurrently with PHYS 212 or PHYS 222 by permission. Three lecture hours. Prerequisites: PHYS 212 or PHYS 222, MATH 274.

**PHYS 553 PHYSICAL OPTICS (3)** Electromagnetic theory of light, wave solutions, interference, diffraction, scattering, radiation from coherent and incoherent sources, elementary theory of masers and lasers. Three lecture hours. Prerequisite: PHYS 355 or consent of instructor.

**PHYS 554 ELECTRICITY AND MAGNETISM (4)** Electrostatics, magnetostatics, and electromagnetic radiation. Among the topics normally covered are the Divergence Theorem and Stokes' Theorem, electrostatics in free space and in dielectric materials, the Biot-Savart Law, the magnetic vector potential, inductance and electromotance, magnetic materials, Maxwell's Equations in free space and in materials. Other topics sometimes covered include wave guides, Snell's Laws, radiation from antennas, radiation from accelerated point charges. Four lecture hours. Prerequisite: MATH 274,

PHYS 212 or PHYS 222. (Not open to those who have taken PHYS 305.)

**PHYS 555 INTRODUCTORY QUANTUM MECHANICS (3)** The Schroedinger equation, states of one particle in one dimension, potential barrier problems in one dimension, the harmonic oscillator, system of particles in one dimension, motion in three dimensions, angular momentum, spin, application to atomic physics. Prerequisites: PHYS 351, MATH 373.

**PHYS 556 INTRODUCTION TO STATISTICAL MECHANICS (3)** Distribution functions, microcanonical, canonical and grand canonical ensembles, the partition function and thermodynamics relations. Fermi-Dirac and Bose-Einstein statistics, some simple models and applications, the Maxwell-Boltzman transport equation and the hydrodynamic equation, transport coefficients. Three lecture hours. Prerequisite: PHYS 455.

**PHYS 559 NUCLEAR PHYSICS (3)** A lecture and problem course dealing on an introductory level concerning experimental and theoretical method for the study of nuclear structure. Topics to be covered include; properties of nuclei, electromagnetic transition and beta decay; nuclear models, nuclear reactions, and two-body interactions. Given in alternate years. Prerequisite: PHYS 311, PHYS 307 or consent of instructor.

**PHYS 570-579 SPECIAL TOPICS IN EARTH SCIENCE (1-4)** Specific topics in the area of earth science (geology, astronomy, atmospheric sciences, oceanography). Topics will be determined by their need for study and relevance to existing courses. Prerequisite: Consent of instructor.

**PHYS 585-586 PHYSICS SEMINAR I, II (1, 1)** Students participate in colloquia on topics of current interest in physics research under guidance instructor. One lecture hour. Prerequisite: Senior standing or consent of instructor.

**PHYS 590 INDEPENDENT STUDY IN PHYSICS (1-4)** Prerequisite: At least Junior

status and one course in the Physics Department. May be repeated for a maximum of six credits.

### **PHYS 591 DIRECTED READINGS**

**(1-4)** Prerequisites: At least Junior status and one course in the Physics Department. May be repeated for a maximum of six credits.

### **PHYS 595-596 RESEARCH PROBLEMS**

**IN PHYSICS (1-3)** Individual project in any branch of physics. Students can choose either to work on projects or in areas suggested by physics faculty. At the completion of a project, the student must write a formal research paper on the work done. Students may register for this more than once but at different levels. Prerequisite: Permission of the instructor who will direct the proposed work.

## **POLITICAL SCIENCE (POSC) —**

### **POSC 503 THEORY OF INTERNATIONAL POLITICS (3)**

The theories of mutual relations of states. Elements of national power; international politics as a struggle for power. Restraints upon the struggle for power. Prerequisite: HIST 242 or POSC 107 or consent of instructor.

### **POSC 505 URBAN GOVERNMENT AND POLITICS (3)**

The political history of American cities from the eighteenth century through the recent reform movement. City charters, home rule, types of executives, political machines. The metropolitan area. Prerequisite: POSC 103.

### **POSC 506 SIMULATION AND GAMES IN POLITICAL SCIENCE (3)**

Analysis of political decisions using the formal methods of rational choice and game theory. Discussion of voting methods, public goods and paradoxes of collective choice. Use of computer simulations and games to model politics. Prerequisite: One upper division (300 or 400) political science course or permission of the instructor.

### **POSC 507 CONTEMPORARY INTERNATIONAL POLITICS (3)**

An examina-

tion of the conduct of international relations by the Western, the Communist, and the non-aligned blocs in the Post-World War period. Prerequisite: POSC 107, POSC 303, or consent of instructor.

### **POSC 508 COMPARATIVE GOVERNMENT OF FOREIGN POWERS: THE WESTERN WORLD (3)**

An examination of the problems of modernization and stable constitutional rule in England, France, Italy and Germany. Prerequisite: POSC 101, POSC 137 or consent of instructor.

### **POSC 509 COMPARATIVE POLITICAL SYSTEMS (3)**

The course will attempt to bring together the analytical concepts and methodological techniques that may be applied to the study of political systems in a comparative sense. Prerequisite: POSC 103, POSC 137 or consent of instructor.

### **POSC 511 AFRICAN GOVERNMENT AND POLITICS (3)**

An examination of the rise of African nationalism and the emergence of new states in Africa. Attention is directed to the influence of colonial rule and traditional political institutions on the development of party politics, patterns of government, and pan-African ideas. A trend toward the military rule, political problems of the independent Africa, and the efforts of each country to build a strong and viable political system are emphasized. Prerequisite: Any Political Science course or consent of instructor.

### **POSC 512 THE LATIN AMERICAN POLICY OF THE UNITED STATES (3)**

An analysis of the Latin American Policy of the United States from the Monroe Doctrine to the present. Emphasis will be on historical, political, economic, and security factors in the ebb and flow of inter-American relations. Prerequisite: POSC 101, POSC 137 or consent of instructor.

### **POSC 513 POLITICAL BEHAVIOR (3)**

The purpose of this course is to introduce the student to the substantive theory and methodology of behavioral analysis. Topics include voting behavior, elite behavior, and an analysis

of types of political conflict. Prerequisite: POSC 101 or consent of instructor.

**POSC 514 PUBLIC ADMINISTRATION**

**(3)** Administration as a central element of contemporary society, with special reference to the problems of government organization, control, personnel, finance, and public relations. Prerequisite: POSC 103.

**POSC 515 THE PRESIDENCY**

**(3)** A discussion of the origin of the office, the selection of the President and policy making in the executive branch. Prerequisite: POSC 103.

**POSC 516 CONGRESS**

**(3)** An investigation of the relations of Congress with the other branches of government and with the political parties and interest groups. The course also examines the relationships between a member of Congress and his constituency as well as the internal dynamics of Congress. Prerequisite: POSC 103.

**POSC 517 AMERICAN POLITICAL PARTIES**

**(3)** Origin and development of the American two-party system. The activities of pressure groups and organizations, and their effects upon the party system. Prerequisite: POSC 103 or consent of instructor.

**POSC 518 CONSTITUTIONAL LAW I**

**(3)** The first of two one-semester courses on the nature and processes of American constitutional law. This course will focus on the origins of American constitutionalism, federalism, and the separation of power. Prerequisite: POSC 102.

**POSC 519 CONSTITUTIONAL LAW II**

**(3)** Second of two one-semester courses covering major issues of constitutional law, focusing primarily on the activities of the Supreme Court in civil rights and civil liberties. Prerequisites: POSC 101 and POSC 418.

**POSC 527 POLITICAL THEORY I**

**(3)** Political thought in the West from the Greeks to the end of the sixteenth century. Prerequisite: POSC 101 or consent of instructor.

**POSC 528 POLITICAL THEORY II**

**(3)** Political philosophers and their writings since the sixteenth century. Attention given to the conflict of ideologies in the twentieth century. Prerequisite: POSC 101 or consent of instructor.

**POSC 530 POLITICAL IDEAS OF SOCIALISM AND COMMUNISM**

**(3)** This course deals with selected topics in the political theory of socialism and communism including socialism and the ancient regimes, socialism and political organization. Russian, Leninist and Stalinist theory, and socialist ideas in the post cold War period. Prerequisite: POSC 528.

**POSC 531 POLITICS AND RELIGION IN GLOBAL PERSPECTIVE**

**(3)** Church-State conflicts in a global context emphasizing Poland, Nicaragua, Nigeria, Iran, Israel, and the United States. Prerequisites: POSC 101, 107, or any course of History of the Soviet Union or Eastern Europe or consent of instructor.

**POSC 532 UNITED STATES-SOVIET RELATIONS**

**(3)** Diplomatic, cultural, and economic relations between the U.S.S.R. and the U.S. Emphasis on the period since 1933 with a careful study of the effects of the Second World War upon the balance of power. Prerequisite: Any 100 level political science course or consent of instructor.

**POSC 533 DOMESTIC POLITICS OF THE SOVIET UNION AND EASTERN EUROPE**

**(3)** Analysis of selected policies of the Soviet Union and Socialist Eastern Europe emphasizing health, education, and welfare. Prerequisites: POSC 101, 107, 137, or consent of instructor.

**POSC 535 AFRICA IN WORLD POLITICS**

**(3)** The role of African nations in the nuclear age, and their efforts to achieve unity. Prerequisite: POSC 511 or consent of instructor.

**POSC 536 COMPARATIVE GOVERNMENTS OF THE SOVIET UNION AND EASTERN EUROPE**

**(3)** This course intro-

duces students to the political systems of the Soviet Union and Eastern Europe. Particular attention is given to the study of structure and function of government and its constitutional, legal and political aspects. Prerequisite: POSC 101 or POSC 137 or consent of instructor.

**POSC 537 CASTRO AND THE CUBAN REVOLUTION (3)** A discussion of the factors that led up to the Castro Revolution in 1959 and the subsequent impact of the creation of the first socialist state on the Western Hemisphere. Prerequisite: POSC 512, POSC 551, or consent of instructor.

**POSC 538 COMPARATIVE GOVERNMENT OF FOREIGN POWERS: RUSSIA AND THE EAST (3)** constitutional and legal processes of Russia, Japan, China and other Eastern powers. Prerequisite: POSC 101, POSC 137, or consent of instructor.

**POSC 539 UNITED STATES FOREIGN POLICY IN SOUTHEAST ASIA (3)** American foreign policy in southeast Asia in the Post World War II period. Prerequisite: POSC 107, POSC 303, or consent of instructor.

**POSC 541 CONTEMPORARY UNITED STATES-WESTERN EUROPEAN RELATIONS (3)** Emphasis will be on NATO, the European Economic Community, and the AngloAmerican efforts to create an Atlantic partnership between Europe and the United States. Prerequisite: POSC 103, POSC 137, or consent of instructor.

**POSC 545 UNITED STATES FOREIGN POLICY IN SOUTH ASIA (3)** A discussion of American foreign policy in South Asia mainly since 1945. Emphasis will be on India and Pakistan. Prerequisite: POSC 107, POSC 303, HIST 109, or consent of instructor.

**POSC 550 GROUP POLITICS AND PUBLIC OPINION (3)** The role of pressure groups and public opinion in the American political system. Prerequisite: Junior standing and nine hours of political science, or consent of instructor.

**POSC 551 THE GOVERNMENT AND POLITICS OF LATIN AMERICAN (3)** An examination of the informal and formal rules of the political "game" in Latin America with an emphasis on four types of political systems found in contemporary Latin America: democratic reformist revolutionary, populist, and military authoritarian. Prerequisite: POSC 101, POSC 137, or consent of instructor.

**POSC 552 POLITICS AND RELIGION IN THE U.S.A. (3)** Constitutional separation of politics and religion in contrast to the "religionization" of politics through the efforts of religious groups. Prerequisite: POSC 101, or any course in U.S. History, Religion, or consent of instructor.

**POSC 555-556 INTERNATIONAL LAW AND ORGANIZATION I, II (3, 3)** An examination of the theories and the development of international law up to the present. The character of the modern state system, the role of international organizations, and international law and resort to force. Prerequisites: POSC 303 and HIST 242 or consent of instructor.

**POSC 557 SEMINAR: USE OF FORCE IN INTERNATIONAL LAW (3)** Use of force as an instrument of Foreign Policy, legal restraints on its use. Prerequisite: 15 semester hours in POSC including POSC 303 or consent of instructor.

**POSC 559 POLITICAL AND SOCIAL ASPECTS OF REVOLUTION (3)** Nature and function of violence and revolution in modern social systems. Prerequisite: POSC 101, POSC 137, or consent of instructor.

**POSC 561 RESEARCH METHODS IN POLITICAL BEHAVIOR (3)** The major emphasis in this course will be on the use of quantitative techniques in political research. Topics include survey research, the use of computers, and statistical analysis. Prerequisite: Any course at 100 level.

**POSC 563 SCOPE AND METHODS OF POLITICAL SCIENCE (3)** The nature of

political inquiry, approaches to the study of politics and government, and empirical methods of research will be the core areas of this course. Prerequisite: A minimum of nine credits in Political Science including at least one upper-division course.

**POSC 567 POLITICS AND THE BUDGETARY PROCESS (3)** Analysis of the budgetary process. Prerequisites: (Not open to students who have successfully completed the course as a special topic POSC 470-479) POSC 375 or consent of instructor.

**POSC 570-579 SPECIAL TOPICS IN POLITICAL SCIENCE (3)** An examination of current topics in political science. The content of the course will depend upon mutual faculty and student interest. Prerequisite: Any 100 level POSC course or consent of instructor.

**POSC 581 SEMINAR: PUBLIC POLICY ANALYSIS (3)** Theoretical and practical approaches in the analysis of policy formulation, implementation, and evaluation. Prerequisites: 15 semester hours in POSC including one upper division course or consent of instructor.

**POSC 582 SEMINAR IN POLITICAL SCIENCE (3)** Analysis of major issues in political science. Prerequisite: 15 semester hours in POSC including one upper division course or consent of instructor.

**POSC 583 SEMINAR: POLITICS AND THE NEWS MEDIA (3)** Relationship between government and news media. Prerequisite: 15 semester hours in POSC including one upper division course or consent of instructor.

**POSC 585 DEMOCRATIC THEORY SEMINAR (3)** 16th century origins and analysis of variants. Prerequisite: 15 semester hours in POSC including POSC 428 or consent of instructor.

**POSC 586 SEMINAR: JUSTICE AND THE LAW (3)** Central legal, political, and moral questions concerning justice and the law. Prerequisites: POSC 101, 209, 401.

**POSC 588 SEMINAR: TOPICS IN PUBLIC POLICY (3)** Focus on policy areas of contemporary interest and significance. Prerequisite: 15 semester hours in POSC including one upper division course or consent of instructor.

**POSC 590 INDEPENDENT STUDY (1-3)** Individual and supervised study in selected areas of political science. Admission by consent of instructor.

**POSC 591 SEMINAR IN CONTEMPORARY UNITED STATE FOREIGN POLICY (3)** Contemporary nature, basis, and instruments of American foreign policy. Prerequisites: 15 hours of POSC including POSC 107 or 303 or consent of instructor.

**POSC 593 INTERNSHIP (3)** Familiarizes students with the practical working of government institutions in which students combine theory and practice. No more than 3 credit hours may be earned in any one semester. Prerequisite: Junior/Senior standing and consent of instructor.

## PSYCHOLOGY (PSYC) ---

**PSYC 503 PSYCHOLOGY OF INFANCY AND CHILDHOOD (3)** An advanced course reviewing historical and current changes in the areas of infancy and childhood. Emotional, cognitive and individual development will be covered in depth. Emphasis is placed on critical analysis of research theory construction and methods. Prerequisite: PSYC 203. Spring.

**PSYC 504 ADOLESCENT PSYCHOLOGY (3)** Physical, emotional, intellectual development during adolescence; social development and heterosexuality; adolescent personality; problems of adjustment; juvenile delinquency. Prerequisite: PSYC 203, Fall, Spring.

**PSYC 505 THE PSYCHOLOGY OF AGING (3)** A study of the changes in learning, emotions, personality and social behavior and the impact of culture and attitude on the ag-

ing process. Prerequisite: Six hours of PSYC including PSYC 203. Students should be aware of how to read and understand psychology, journals and how psychological research is conducted. Fall, Evening in alternate years.

**PSYC 509 ORGANIZATIONAL PSYCHOLOGY (3)** Human relations in the work setting. Topics will include theory and research concerning leadership, job satisfaction and motivation, organizational communication, group dynamics, and organizational change. Prerequisite: six hours of PSYC. Fall.

**PSYC 510 PSYCHOLOGY OF LEARNING (3)** Analysis of selected problems in both human and animal learning including reinforcement, punishment, verbal learning and verbal behavior. Prerequisite: Nine hours of PSYC or consent of instructor.

**PSYC 511 TESTS AND MEASUREMENTS (3)** Psychological and educational testing and evaluation. The construction, administration, interpretation and use of the various evaluative devices of aptitude and achievement. Prerequisites: PSYC 101 and PSYC 212. Fall, Spring, Summer.

**PSYC 512 PSYCHOPHARMACOLOGY (3)** A systematic investigation of the effects of drugs on behavior. Drug classification, historical aspects, methodological considerations, uses in treatment, drug abuse, and related topics will be considered. Prerequisite: PSYC 261 or consent of instructor. Fall, Spring.

**PSYC 513 BEHAVIOR MODIFICATION I (3)** Examination and application of the basic principles of the experimental analysis of behavior, with an emphasis on the applied aspects of this modern discipline to schools, jobs, interpersonal relations and self-control. Prerequisite: Nine hours of PSYC or consent of instructor.

**PSYC 515 MOTIVATION (3)** Interaction between physiological, neurological, and pharmacological aspects of motivation with environmental influences such as culture, learning and social dynamics. Issues in human motiva-

tion and emotion which will be emphasized are aggression, sex, achievement (competence) and cognitive-social influences. Prerequisite: Six hours of PSYC. (PSYC 203 and Junior standing recommended.)

**PSYC 517 SENSATION AND PERCEPTION (3)** A systematic investigation of the basic senses such as vision, audition, taste, smell, and touch will be undertaken. The organization of sensor input will also be emphasized. Both human and non-human data will be presented. Prerequisite: Nine hours of PSYC or consent of instructor.

**PSYC 518 COMPUTER IMPACT ON PSYCHOLOGY AND HUMAN BEHAVIOR (3)** Effect of computers on psychological training, research methods, clinical and counseling practices, theory development, psychological content, and human behavior. Examination of psychologically oriented computer program (e.g., clinical interviewing). Computer experience not necessary. Prerequisite: Six hours PSYC.

**PSYC 521 APPLICATIONS OF BEHAVIORAL PRINCIPLES TO FAMILY AND CLASSROOM ENVIRONMENTS (3)** Practical application of operant techniques to child management and family functioning. Course will deal with behavioral analysis, behavior modification programs and family contracting both at school and at home, with emphasis on learning basic technical skills. Prerequisite: PSYC 211. Fall, Spring.

**PSYC 524 SOCIAL PSYCHOLOGY (3)** The structure and function of groups. Recent advances in sociology, anthropology and psychiatry as related to psychology. Prerequisite: Six hours of PSYC. Fall & Spring.

**PSYC 529 INTRODUCTION TO THE COUNSELING OF MINORITY GROUPS (3)** An introduction to the study of the counseling function with emphasis upon minority groups needs, counselor attitudes and techniques. Prerequisite: PSYC 101 and psychology major or minor planning to enter one of the helping professions or graduate student in

Guidance and Counseling or consent of program director.

**PSYC 530 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (3)** Individual differences in human traits and characteristics; methodology, basic principles, and major findings in research. Prerequisites: PSYC 101 and PSYC 111. Alternate Springs.

**PSYC 531 GROUP DYNAMICS (3)** Intensive study of group interactions with emphasis upon reciprocal group influence of behavior. Prerequisite: PSYC 325 or consent of instructor. Fall.

**PSYC 535 INTERNSHIP IN PSYCHOLOGY (3-6)** Placement in a community service agency to familiarize the student with its current practices. Supervised client contract will be provided. May be repeated for a maximum of 12 credits but only six can apply to the major, the other six credits will be used as general electives. Prerequisites: 233 hours of psychology and consent of instructor.

**PSYC 539 THE INITIAL INTERVIEW (3)** Clinical observation and practicum experience. Focus on interviewer and interviewee dimensions and relationship with patients. Use of tapes, seminars and individual supervision. Prerequisite: PSYC 205, and admission to Clinical Concentration Program. Fall.

**PSYC 540 ENVIRONMENTAL PSYCHOLOGY (3)** The relationship between the physical and social environment and behavior, i.e., places, spaces, and people. How man/woman construes, interprets, comprehends, feels about the environment and how the environment functions as a reflection of human needs and values. Topics include environmental design, crowding, privacy, human territoriality, personal space. Prerequisite: PSYC 101. Fall, Spring.

**PSYC 542 ABNORMAL PSYCHOLOGY (3)** Disordered personal reactions to life. Organic and functional phenomena plus therapeutic techniques. Prerequisite: Nine hours

PSYC including PSYC 203 or consent of instructor. Fall, Spring.

**PSYC 547 SEX DIFFERENCES: PSYCHOLOGICAL PERSPECTIVES (3)** Sex role/personality development is examined from various perspectives: social, cultural, evolutionary, and biological. Changing conceptions with regard to women, their roles and self-concepts, are emphasized within the overall context of sex difference and similarities in behavior. Prerequisite: PSYC 203 or permission of instructor.

**PSYC 549 THE PSYCHOLOGY OF LESBIAN CULTURE (3)** This course develops an understanding of the impact of culture on the development of a lesbian identity and on social/emotional aspects of a lesbian identity within a psychological framework. Prerequisites: Two courses in psychology or women's studies or consent of instructor.

**PSYC 550 PERSONALITY (3)** Theoretical and practical approaches to the study of personality. Introduction to psychodynamics and to methods and materials of assessment. Prerequisite: Six hours PSYC. Fall, Spring.

**PSYC 551 INTRODUCTION TO THE EXCEPTIONAL CHILD (3)** Children with a typical physical, mental, social and emotional development, including the physically handicapped, the mentally retarded, the gifted, and emotionally disturbed children. Prerequisite: PSYC 201, PSYC 203, or PSYC 211.

**PSYC 553 ISSUES IN MENTAL HEALTH INTERVENTION (2)** Readings, lectures, and seminars relating to psychological emergencies and the modes of intervention during psychological crises. Prerequisite: PSYC 425, PSYC 454 concurrent, admission to Clinical Concentration Program.

**PSYC 557 GENDER IDENTITY IN TRANSITION (3)** Psychological consequences of changing definitions of femininity, masculinity, and personhood will be examined by using recent theories of gender identity for-

mation. Concepts such as androgyny, sex-role transcendence and future shock will be related to psychological adaptation to change. Prerequisites: PSYC 315 or PSYC 447 or consent of instructor.

**PSYC 560 ETHOLOGY AND COMPARATIVE PSYCHOLOGY (3)**

A survey of the major behavioral adaptations in non-human and human species, within the framework of evolutionary theory, ethology, and experimental psychology. Three hours of lecture a week. Prerequisite: nine hours of PSYC or consent of instructor.

**PSYC 565 PHYSIOLOGICAL PSYCHOLOGY (3)**

The course is concerned with an introduction to the physiological bases of behavior. The topics to be considered are basic neuroanatomy and neurophysiology, sensory and motor systems, motivational systems, and "higher order" behavioral systems. Three hours of lecture per week. Prerequisite: Nine hours of PSYC or consent of instructor.

**PSYC 567 MIDLIFE DEVELOPMENT (3)**

A study of adult behavior between the ages of 18 and 60. The developmental stages of young adulthood, adulthood, and middle age will be discussed along with topics pertinent to each of the levels such as leaving and becoming emancipated from the family; the transition and adjustment to marriage and work; and bridging the gap between ideals and actual fulfillment. Prerequisite: PSYC 203.

**PSYC 570-579 SPECIAL TOPICS (1-3)**

Survey and critical evaluation of modern literature pertaining to selected problems in psychology. May be repeated in a different topic for a maximum of 12 credits.

**PSYC 580 SYSTEMS OF PSYCHOLOGY (3)**

Schools of psychology with their theoretical and methodological approaches. Prerequisites: at least a junior psychology major and consent. Alternate springs.

**PSYC 581 READING IN PSYCHOLOGY (1-2)**

A survey of relevant research literature under the guidance of a staff member who will

direct the students' research. This course may be taken a maximum of two times for major credit purposes. Prerequisites: NINE hours of PSYC and consent of instructor.

**PSYC 585 EXPERIMENT DESIGN (4)**

Design and analysis - Analysis of variance (completely randomized design, repeated measurement designs, etc.), multiple comparisons, nonparametrics, general problems related to sampling, experimental effects, etc. Prerequisite: PSYC 212 or consent of instructor. Fall, Spring.

**PSYC 591 INDEPENDENT INVESTIGATION IN PSYCHOLOGY (3)**

An opportunity for especially qualified students to undertake research problems according to their interest and training under the direction of a staff member. May be repeated for a maximum of 12 credits but only six credits can apply to the major; the other six credits will be used as general electives. Prerequisite: PSYC 261 and consent of instructor. Fall, Spring.

**PSYC 601 SEXUAL COUNSELING (3)**

Human sexual relationships, with emphasis on social and sexual problems and new treatment techniques for sexual dysfunction. Prerequisite: Psychology, health science, or nursing major or consent of the department.

**PSYC 603 HUMAN LEARNING (3)**

Aspects of learning applicable specifically to human behavior including topics such as acquisition, memory, problem solving, creativity and language. Topics discussed within a framework of historic and current theoretical research perspectives. Prerequisite: 21 credits in psychology.

**PSYC 605 COUNSELING TECHNIQUES (3)**

Counseling skills essential in facilitating client self awareness. Training the student in practical skills through demonstration and role playing with feedback in behavioral performance.

**PSYC 606 CAREER DEVELOPMENT (3)**

Designed to familiarize students with aspects of career development, to introduce them to a variety of relevant resources and media and to

assist them in integrating this knowledge by planning a program of career development for a specific group. Prerequisite: Graduate standing.

**PSYC 607 APPLIED THEORIES OF COUNSELING (3)** Those counseling theorists whose applied methodology has been successful in the treatment of various client population. Techniques and application of methodologies in field settings.

**PSYC 608 PRINCIPLES OF GUIDANCE (3)** Philosophy and a knowledge of the principles of guidance. Prerequisite: PSYC 611 or the equivalent.

**PSYC 609 COUNSELING PSYCHOLOGY - PRE-PRACTICUM (3)** Ethics, issues, and history of counseling psychology. Counseling with children and adults, various points of view, techniques for introducing therapeutic movement, and the essentials necessary for effective counseling. Prerequisite: Must be a graduate student in counseling Psychology, passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 611 DEVELOPMENTAL PSYCHOLOGY (3)** Psychological structures and functions in human development. Theoretical and research approaches. Prerequisite: PSYC 201 or equivalent.

**PSYC 613 COMMUNITY MENTAL HEALTH COUNSELING (3)** Types of community health services and the relationships between those services; the responsibility of counseling in a mental health center; and the area of mental health consultant. Emphasis will be given to the application of counseling skills in a mental health setting (pre-practicum). Prerequisite: Graduate standing in counseling.

**PSYC 615 INTRODUCTION TO RESEARCH METHODS IN COUNSELING (3)** Principal methods of behavioral research emphasizing concepts rather than statistical procedures. Preparation of counselors to evaluate methods, designs, and results of

counseling research. Prerequisite: graduate standing in counseling.

**PSYC 620 PSYCHODIAGNOSTICS I: INTELLIGENCE (3)** Construction -standardization, administration, scoring and interpretation of the Weschler and Staford-Binet scales. Bender Gestalt, Human Figure Drawings, and appropriate achievement tests. Prerequisite: Matriculation in clinical or school psychology and consent of program director.

**PSYC 625 BEHAVIORAL TECHNIQUES (3)** Application of behavioral strategies to children in home and school settings. Consultation stressed. Prerequisites: 21 credits in psychology, matriculation in graduate program in Psychology, consent of program director.

**PSYC 627 SEMINAR IN TRAINING AND DEVELOPMENT (3)** Study of the psychological and economic aspects of training and development in various types of organizational environments. This will involve such areas as adult learning, needs assessment, budget considerations, marketing and training models and organizational development. Prerequisite: Graduate standing in the Human Resource Development (HRD) program or consent of instructor.

**PSYC 629 PERSONNEL SELECTION AND PERFORMANCE MANAGEMENT (3)** Selection and evaluation of personnel. Including legal issues and fairness, reliability and validity of employment tests, and review of current practices in industry. Prerequisite: Graduate standing in the Human resources Development program or consent of the instructor.

**PSYC 631 ADVANCED ABNORMAL PSYCHOLOGY (3)** Current and historical perspectives of psychopathology. Emphasis on varied approaches in contemporary schools. Prerequisite: PSYC 542.

**PSYC 635 INTRODUCTION TO CLINICAL HYPNOSIS (3)** Ethics, issues, history and uses of clinical hypnosis. Emphasis on per-

forming basic hypnotic induction and deepening techniques.

**PSYC 637 COUNSELING STRATEGIES FOR DRUG AND ALCOHOL ABUSE**

**(3)** Understanding the basic issues of substance abuse, referrals, clinical assessments and developing counseling strategies for successful intervention. Prerequisites: PSYC 605 and PSYC 607.

**PSYC 640 MENTAL HYGIENE IN EDUCATION**

**(3)** Principles of mental hygiene and their application to the educational setting. Emphasis on personality development. Prerequisite: PSYC 611.

**PSYC 641 CHANGE IN THE WORK-PLACE**

**(3)** An interdisciplinary study of workplace changes. Topics to be covered are: international competition, work force demographics, information technology, changing nature of work and the learning organization. Prerequisite: Graduate standing in the Human Resource development (HRD) program or consent of instructor.

**PSYC 642 ORGANIZATIONAL BEHAVIOR**

**(3)** Theoretical and applied aspects of organizational behavior through the use of psychological concepts. Individual, group, technological, and structural theory are examined in the context of organizational effectiveness. Prerequisite: Graduate standing in the Human Resource Development (HRD) program or consent of instructor.

**PSYC 644 TEAM BUILDING**

**(3)** Psychological and organizational aspects of group dynamics and work teams. Application of theory to actual teams in workplace. Prerequisite: Graduate standing in HRD program or consent of instructor.

**PSYC 645 COPING STRATEGIES IN THE CLASSROOM**

**(3)** Application of psychological principles and concepts as they relate directly to the classroom. Development of awareness of teacher impact on the classroom members with specific emphasis on individual

differences. Open to teachers, counselors and administrators. Prerequisite: PSYC 651.

**PSYC 651 TECHNIQUES OF INTERVENTION**

**(3)** Group and individual intervention strategies. Prerequisites: Matriculation in school, clinical or counseling psychology and consent of program director.

**PSYC 653 RESEARCH ISSUES IN SCHOOL/CLINICAL PSYCHOLOGY**

**(3)** Analysis of major issues in school and/or clinical psychology. Prerequisites: PSYC 212, graduate standing in school or clinical psychology and consent of program director.

**PSYC 655 LEARNING DISABILITIES I: ASSESSMENT**

**(3)** Theoretical issues and assessment of learning disabilities in school-aged children. Prerequisites: Matriculation in school psychology track, and consent of program director.

**PSYC 657 LEARNING DISABILITIES II: REMEDIATION**

**(3)** Intervention strategies and consultation in the schools. Prerequisites: Matriculation in school psychology track. PSYC 655.

**PSYC 661 FOUNDATIONS OF REHABILITATION COUNSELING**

**(3)** Development of rehabilitation programs; their legal basis and historical background. Roles of medical, psychological, educational and community resources in the rehabilitation program included. Client eligibility, determination, counselor responsibilities will be reviewed. Prerequisite: PSYC 101.

**PSYC 663 SYSTEMS OF PSYCHOTHERAPY**

**(3)** Prominent schools of psychotherapy, emphasis on the psychotherapeutic aspect of education and clinical settings. Prerequisites: PSYC 350, PSYC 361, PSYC 230, PSYC 631.

**PSYC 665 PSYCHOTHERAPY AND BEHAVIOR CHANGE I**

**(3)** First of two semester sequence. Readings, lectures and actual experience related to theories and techniques

currently used for behavior change. Individual psychotherapy, family therapy, transactional analysis, rational emotive therapy and behavior modification reviewed. May be taken without Psychotherapy and Behavior Change II. Prerequisites: Graduate standing in school or clinical psychology tracks and consent of program director.

**PSYC 666 PSYCHOTHERAPY AND BEHAVIOR CHANGE II (3)** Second of two semester sequence. Continued analysis of psychotherapy approaches through readings, lectures and experience. Prerequisites: PSYC 665 and consent of program director.

**PSYC 667 PSYCHO-SOCIAL ASPECTS OF DISABILITY (3)** Psychosocial milieu on the disabled person's self-concept, approaches to facilitating autonomy and self-actualizing goals emphasized. Prerequisite: Graduate standing in psychology and consent of instructor.

**PSYC 668 MEDICAL ASPECTS OF DISABILITY (3)** Structure and function of bodily systems and implications of physical disabilities in going with the problems of daily living. Prerequisite: PSYC 101.

**PSYC 673 ADVANCED EXPERIMENTAL PSYCHOLOGY I (4)** Experimentation in the field of human behavior. Prerequisites: PSYC 212, PSYC 314 or equivalent; consent of department.

**PSYC 674 ADVANCED EXPERIMENTAL PSYCHOLOGY II (4)** Major concepts, processes and methods in the field of animal behavior, with primary emphasis on ethology and comparative psychology. Prerequisites: PSYC 212, PSYC 314 or equivalent; consent of department.

**PSYC 675 PROSEMINAR I (3)** Selected issues in areas such as learning, motivation, physiological psychology and ethology-comparative psychology within the context of research and scientific writing. Prerequisites: PSYC 314 or equivalent.

**PSYC 676 PROSEMINAR II (3)** Selected issues in areas such as social, developmental, industrial, personality, ethology/comparative, and physiological psychology. Prerequisite: PSYC 314 or equivalent.

**PSYC 677 LEARNING (3)** Overview of current issues in learning. Emphasis on the critical analysis and reporting of primary literature. Prerequisite: PSYC 305 or consent of instructor.

**PSYC 679 SPECIAL TOPICS SEMINAR (1-3)** Topics vary, according to the instructor.

**PSYC 681 ADVANCED HISTORY AND SYSTEMS OF PSYCHOLOGY (3)** Ancient and modern psychological history drawing heavily from philosophy and physiology and psychology in various countries. Analysis of systems include a study of functionalism, structuralism, behaviorism, Gestalt and psychoanalysis.

**PSYC 684 COLLEGE TEACHING SEMINAR (3)** Materials and procedures for producing successful students in lower level courses.

**PSYC 685 COLLEGE TEACHING PRACTICUM (3)** Supervised teaching of introductory psychology. Prerequisite: PSYC 684.

**PSYC 687 ADVANCED EXPERIMENTAL DESIGN (3)** Treatment of descriptive and inferential statistical methods and design considerations. Prerequisite: PSYC 687 or equivalent.

**PSYC 687 ADVANCED EXPERIMENTAL DESIGN I (3)** Treatment of descriptive and inferential statistical methods and design considerations. Prerequisite: PSYC 212 or equivalent.

**PSYC 688 ADVANCED EXPERIMENTAL DESIGN II (3)** Treatment of advanced analysis of variance designs and related techniques. Prerequisite: PSYC 687 or equivalent.

**PSYC 689 MULTI VARIATE METHODS**

**(3)** Multi variate statistical methods useful in behavioral scientific research. Topics: correlation, regression, factor analysis, discriminant analysis. Prerequisite: PSYC 687.

**PSYC 695 INDEPENDENT STUDY (3)**

Individual and supervised study in selected areas of Psychology. Prerequisite: Consent of instructor.

**PSYC 697 PRACTICUM IN CLINICAL PSYCHOLOGY (3)**

Supervised experience in psychological interviewing, assessment, and psychotherapy. Practicum in which students will meet for individualized supervision with the practicum instructor. Prerequisites: PSYC 620, M.A. candidacy in clinical psychology and consent of program director.

**PSYC 703 PRE-SCHOOL ASSESSMENT (3)**

Formal and informal assessment techniques including behavioral assessments and adaptive behavior scales. Prerequisites: Matriculation in school psychology track, consent of program director, and PSYC 620..

**PSYC 707 INFORMATION SERVICE IN GUIDANCE & COUNSELING (3)**

Educational and vocational opportunities and community referral sources; including evaluation, classification and use of such information in a guidance and counseling program. Prerequisite: PSYC 605.

**PSYC 708 MEDIA IN CAREER EDUCATION (3)**

Production of videotapes, films, filmstrips, slides and audiotapes pertaining to the world of work. Workshop procedures are used to develop career education materials for use in a variety of employment settings. Prerequisite: PSYC 707.

**PSYC 711 ANALYSIS OF THE INDIVIDUAL (3)**

The individual, emphasizing data in the areas of vocational, educational and personal adjustment. Prerequisites: PSYC 705 and PSYC 611 (PSYC 705 may be taken concurrently), must have passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 715 ADVANCED SEMINAR IN PSYCHOTHERAPY (3)**

Counseling and therapy techniques used by counselors and other professional personnel working with children and adults. Prerequisite: PSYC 609.

**PSYC 717 THEORIES OF FAMILY COUNSELING (3)**

Theoretical approaches and strategical methods of evaluating and counseling disturbed families. Prerequisite: PSYC 609.

**PSYC 718 TECHNIQUES OF FAMILY COUNSELING (3)**

Identification of problems that cause families to deteriorate, diagnosis of those problems, and techniques that will help families work through their difficulties. Emphasis on development of skills essential to effective family counseling practice. Prerequisite: Six graduate credits in counseling or equivalent.

**PSYC 721 GROUP COUNSELING (3)**

Theories, principles, and techniques of group counseling. Some additional topics to be covered are the role of the leader, problems of member selection, evaluation of group progress, and the ethics and training of group counselors. Prerequisites: Must have passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 723 GROUP COUNSELING PRACTICUM (3)**

Supervised practical experience in leading a counseling group. Prerequisites: PSYC 621, consent of program director, and successful advancement to candidacy exam.

**PSYC 727 USE OF TEST IN COUNSELING (3)**

Practice in the use and analysis of techniques for understanding the individual with emphasis upon standardized procedures use in the public schools. Prerequisites: Must have passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 730 COUNSELING THE ELEMENTARY SCHOOL CHILD (3)**

The

dynamics of child behavior, techniques of assessing and counseling. Study of the family, school, and community structures and their effect on the child. Prerequisite: PSYC 609.

**PSYC 731 SCHOOL-BASED CONSULTATION (3)** Theoretical and applied aspects of school consultation within framework of curricular, administrative and overall school environment. Prerequisite; Matriculation in school psychology track, consent of instructor.

**PSYC 733 ASSESSMENT AND TREATMENT OF EXCEPTIONAL CHILDREN (3)** Skill development in identification of and planning for the major exceptionalities in the schools. Stress on major diagnostic categories and relevant new techniques. Prerequisites: Matriculating in school psychology track, consent of program director.

**PSYC 745 PRACTICUM IN COUNSELING PSYCHOLOGY (6)** Supervised experience in educational, vocational and personal counseling. Must be taken in two separate semesters (three credits per semester.) Perquisites: Must have passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 755 COGNITIVE THERAPY I (3)** Theory and techniques of Cognitive and Rational-Emotive therapy, including assessment strategies and basic applications. Prerequisites: Matriculation in clinical Psychology program, completion of PSYC 631, PSYC 655, PSYC 656, and consent of program director.

**PSYC 756 COGNITIVE THERAPY II (3)** Advanced applications of Cognitive and Rational-Emotive Therapy to specific clinical problems and differing client populations, ranging from children to adults. Prerequisites: Matriculation in clinical Psychology program, completion of PSYC 631, PSYC 655, PSYC 656, and consent of program director.

**PSYC 761 PSYCHODIAGNOSTICS II: PERSONALITY EVALUATION (3)** Administration, scoring and interpretation of currently used projective techniques. Prerequisite:

Matriculation school or clinical psychology and consent of program director.

**PSYC 763 PSYCHODIAGNOSTICS III: CONSULTATION (3)** Advanced interpretation and data transmission. Consultation based upon intellectual and projective data and adaptive behavior. Prerequisites: PSYC 620 and PSYC 761 and consent of program director.

**PSYC 765 PERSONALITY ASSESSMENT IN CLINICAL PSYCHOLOGY (3)** Theoretical and empirical bases underlying personality assessment. Introduction to methods and instruments used in clinical evaluation. Prerequisite: matriculation in clinical psychology and consent of program director.

**PSYC 766 ADVANCED PERSONALITY ASSESSMENT IN CLINICAL PSYCHOLOGY (3)** Expand skill building process in administration, analysis, and report of personality assessment data with clinical populations. Prerequisites: PSYC 765 and consent of program director.

**PSYC 771 PRACTICUM IN PSYCHODIAGNOSTIC EVALUATION (3)** Field work under the supervision of a certified or licensed psychologist. Prerequisites: PSYC 761, PSYC 655, PSYC 620, PSYC 763, consent of program director.

**PSYC 773 PRACTICUM IN INTERVENTION TECHNIQUES (3)** Field work under the supervision of a certified or licensed psychologist. Students must be available for clinic or school placement. Stress on techniques appropriate for the schools. Prerequisites; Matriculation in school psychology track, evidence of academic preparation in intervention techniques. PSYC 651, PSYC 625, and consent of program director.

**PSYC 790 SEMINAR IN ETHICS AND PROFESSIONAL PSYCHOLOGY (3)** Treatment of ethical, legal and professional issues relating to practice of school and clinical psychology. Course may be repeated for credit by students who took course prior to Fall 1983. Prerequisite: Consent of instructor.

**PSYC 793 INTERNSHIP IN COUNSELING (3)** Intensive experience within a counseling facility involving exposure to the many facets of a mental health professional, including administrative and recordkeeping duties; individual and group counseling observations and experiences; referral resources, etc. Prerequisites: Must have passed the departmental advancement to candidacy examination and have consent of the counseling program director.

**PSYC 794 INTERNSHIP IN SCHOOL PSYCHOLOGY (3)** Each student must be a full-time student during the semester he/she enrolls in this course, typically the last semester of work. Student is placed in an internship in a school or clinic, depending upon his/her specific orientation. This course may be repeated up to a total of three times with the written consent of the . Prerequisite: MA or CAS candidate in school psychology concentration. PSYC 773.

**PSYC 797 INTERNSHIP IN CLINICAL PSYCHOLOGY (3)** Supervised field experience in a community mental health center, state psychiatric hospital, or other public mental health facility with exposure to the duties of a master's level clinical psychologist including psychological assessment, psychotherapy and report writing. Prerequisites. PSYC 697 and consent of Clinical Psychology program director.

**PSYC 898 THESIS (6)**

**PSYC 899 THESIS CONTINUUM (1)**

## **READING EDUCATION (REED) \_\_\_\_\_**

**REED 601 READING THEORY AND PRACTICE (3)** Theoretical foundations of reading instruction; methods and materials used in integrated reading/literacy learning. Prerequisite: One undergraduate course in teaching of reading. Not open to students who have taken EDUC 623.

**REED 609 READING ASSESSMENT (3)** Reading assessment using both standardized tests and informal procedures; interpretation of assessment data. Prerequisite: One course in educational assessment.

**REED 621 READING DISABILITIES (3)** Etiology of reading disabilities, observation and interview procedures, standard and informal tests, report writing, diagnosis and correction of reading difficulties. Prerequisite: One undergraduate course in the teaching of reading. Not open to students who have taken EDUC 621.

**REED 622 CORRECTIVE READING (3)** The psychology of reading; methods, principles, techniques, and materials utilizing classroom teacher in meeting atypical learning patterns. Experience in a practicum situation involving the development of skill in analysis and correction of reading disabilities. Prerequisite: ELED 497 and ELED 429 or ELED 427 or consent of instructor (to provide for students who have had different background and/or experience in the field). Not open to students who have taken EDUC 622.

**REED 623 EVALUATION OF READING RESEARCH (3)** Research and experimentation methodology. Prerequisite: A course in test and measurements of statistics and consent of instructor. Not open to students who have taken EDUC 627.

**REED 624 METHODS AND MATERIALS FOR TEACHING READING IN HIGHER EDUCATION (3)** Current methods and materials used in the teaching of reading and study skills. Prerequisite: six credits of reading courses or consent of instructor. Not open to students who have taken EDUC 625.

**REED 625 ORGANIZATION AND ADMINISTRATION OF READING AND STUDY SKILLS PROGRAMS IN HIGHER EDUCATION (3)** Principles, practices and problems of establishing reading/study skills programs. Prerequisite: six credits of reading courses or consent of instructor. Not open to students who have taken EDUC 624.

**REED 626 CLINIC INTERNSHIP IN READING (3-6)** Supervised clinical experience with clients with reading disabilities. Prerequisite: EDUC 621 and EDUC 623. Not open to students who have taken EDUC 626.

**REED 663 LITERATURE-BASED INSTRUCTION I THE LANGUAGE ARTS (3)** Theories underlying literature-based instruction examined; recent research evaluated, instructional techniques introduced, modeled, and applied; materials for instruction cooperatively developed; and criteria for literature selection established. Prerequisite: EDUC 621 and EDUC 623. Not open to students who have taken EDUC 663.

**REED 665 TEACHING READING & WRITING IN THE CONTENT AREAS K-12 (3)** Examination of interrelationship of reading and writing, and their roles in instruction of content areas, K-12. Prerequisites: EDUC 621 and EDUC 623. Not open to those who have had SCED 603 or EDUC 665.

**REED 721 DIAGNOSIS AND EVALUATION OF READING DISABILITIES (3)** Use of standardized and non-standardized instruments and procedures for evaluating reading disabilities. Prerequisite: EDUC 621 and EDUC 623. Not open to students who have taken EDUC 628.

**REED 726 ADVANCED CLINIC INTERNSHIP IN READING (3)** Supervised clinical experience for teachers of developmental, remedial and gifted clients, ages six to adult. Prerequisites: EDUC 621, EDUC 623 and EDUC 626. Not open to students who have taken EDUC 626.

**REED 729 SEMINAR IN READING (3)** Theories, research, and evaluation in the field of reading. Integration of theory and practice. Prerequisites: EDUC 621 and EDUC 623. Not open to students who have taken EDUC 729.

## SCIENCE EDUCATION (SCIE) —

**SCIE 551 TEACHING SCIENCE IN EARLY CHILDHOOD (2)** The course is designed to familiarize the student with appropriate methods and materials in science for the young child. Emphasis will be on interdisciplinary approach. Prerequisite: ECED 341 or concurrently.

**SCIE 570-575 SEQUENTIAL SCIENCE MODULES FOR THE ELEMENTARY SCHOOL TEACHER I-VI (1,2, OR 3)** Three different modules of science instruction will be offered each semester for teachers of primary and intermediate grades. The course will emphasize instructional strategies in both the process and content of the science. A student may elect to take one, two or all three modules for one, two, or three credit hours respectively. All students must attend the first class meeting for course orientation. Thereafter, each module will meet once a week for four weeks. Each meeting will consist of approximately for hours laboratory work. Prerequisite: Teaching experience in the elementary schools.

**SCIE 576 TEACHING SCIENCE IN THE ELEMENTARY SCHOOL (3)** Application, analysis, and integration of science teaching skills in the elementary classroom. Field experience in local schools. Taken concurrently with BIOL 303 and PHSC 303. (UG and G)

**SCIE 580 TEACHING SCIENCE IN THE SECONDARY SCHOOLS (3)** Selection of appropriate content, method and evaluation techniques, analysis of textbooks and resource materials for teaching science in the middle and high schools. Must be taken the semester prior to student teaching. (UG & G) Prerequisites: SCED 341 or ELED 363.

**SCIE 670-679 SPECIAL TOPICS IN SCIENCE EDUCATION (1-4)** A selected topic in science education. Prerequisite: Varies with the topic.

**SCIE 685 SEMINAR IN ELEMENTARY SCHOOL SCIENCE (3)** Practices and trends in organizing, teaching, and improving programs in elementary school science. Prerequisite: Elementary teaching.

## SECONDARY EDUCATION (SCED) \_\_\_\_\_

**SCED 518 YOUNG ADULT LITERATURE (3)** Literature as expression of basic needs and ideas of youth through independent reading; criteria and aids for evaluation and selection of books and other media. Not open to those who have completed EDUC 418/518.

**SCED 557 METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE (3)** Teaching teachers methods of teaching English as a second language. Attention is given to the use of visuals, contractive analysis, drill techniques, and other methods and resources. Prerequisite: Teaching experience or consent of instructor.

**SCED 558 WRITING AS A LEARNING TOOL IN THE SECONDARY SCHOOL (3)** Strategies for using writing to learn content in all disciplines; examination of the writing process - diagnosis, prewriting, drafting, revision, evaluation, and publication. Prerequisite: SCED 341, SCED 319, or consent of instructor.

**SCED 560 USING READING AND WRITING IN THE SECONDARY SCHOOL (3)** General developmental reading skills' identification, diagnosis, and remediation of reading problems; reading-writing connection for comprehension. Vocabulary building and study skills. Prerequisite: SCED 341 or concurrently; written permission. Chair, Dept. Of Secondary Education. (Written permission not required for part-time evening students.)

**SCED 561 TEACHING READING IN THE SECONDARY CONTENT AREAS (3)** Teaching reading study skills leading to reading efficiency and problem solving associ-

ated with specific subject matter content. Prerequisite: SCED 460.

**SCED 563 DEVELOPMENTAL READING FOR THE EARLY ADOLESCENT (3)** Methods of designing and teaching developmental reading programs for the middle or junior high school student. Attention to the following: providing for individual differences, teaching students to read critically, developing and extending reading interests. Prerequisite: SCED 460 or equivalent reading methods course.

**SCED 570-579 SPECIAL TOPICS IN SECONDARY EDUCATION: (Topic to be named) (1-3)** In-depth study of a selected topic in secondary or Adult Education. The specific requirements and prerequisites will vary with each topic and will be designated by the department each time a topic is scheduled. Graduate credit only with approval of the graduate. Each topic may be taken as a separate course.

**SCED 594 TRAVEL AND STUDY IN SECONDARY EDUCATION (1-6)** Study abroad of educational facilities, programs or practices, or selected projects in education topics. By special arrangement with program chair and sponsoring instructor. Consent of graduate program required for graduate degree credit.

**SCED 595 INDEPENDENT STUDY IN EDUCATION: SECONDARY (1-4)** An opportunity for especially qualified students to undertake research problems or study projects relevant to their interest and training under the direction of a staff member. Prerequisite: Consent of Chair of Secondary Education. Graduate credit by consent of Graduate Program only.

**SCED 596 DIRECTED READING IN SECONDARY EDUCATION (1-4)** Independent reading in selected areas of Secondary Education in order to provide for the individual a comprehensive coverage or to meet special needs. By invitation of the department to qualified students. Prerequisite: Obtain

consent of chair of Secondary Education. Graduate credit by consent of Graduate Program only.

**SCED 603 TEACHING WRITING ACROSS THE CURRICULUM (3)** The process of writing, given for specific school systems by the Maryland Writing Project. Small group and assessment techniques included. Prerequisites: Bachelor's degree; teaching experience.

**SCED 605 THEORY, RESEARCH & PRACTICE IN TEACHING COMPOSITION (6)** The teaching of writing skills, K-University and across disciplines; training of participants to become Maryland writing project teacher consultants. Prerequisites: Bachelor's degree; teaching experience; consent of Maryland Writing Project Director.

**SCED 611 INCLUSION/INTEGRATION STRATEGIES FOR SPECIAL NEEDS ADOLESCENT AND ADULTS (3)** Curriculum adaptation, teaching strategies, working with resource teachers, aides, service providers; developing and implementing IEP, Individualized Education Programs (IEP), and transition plans. Prerequisite: Teaching experience, 3 credits special education or consent of instructor.

**SCED 621 INDIVIDUALIZING LEARNING IN THE SECONDARY SCHOOL (3)** Philosophical and psychological bases; goal development; organizational patterns; assessment; teaching strategies in content areas; grading and evaluation; programming for classroom, departmental and school levels. Prerequisite: Teaching experience.

**SCED 623 THE MIDDLE SCHOOL (3)** Functions and characteristics; historical development philosophical and psychological bases; nature of transescent youth; curriculum and organizational patterns. Prerequisite; ELED 361, ELED 462, or SCED 341.

**SCED 625 TEACHING IN THE MIDDLE SCHOOL (3)** Goals and objectives; planning; instructional procedures and

materials; evaluation techniques; special problems of instructing preadolescents. Prerequisite: Teaching experience.

**SCED 627 TRAINING STRATEGIES IN THE WORK PLACE (3)** Teaching/learning dimensions of adults in non-traditional settings - business, industry, government, and the non-profit sector. Prerequisite: Teaching experience or coursework or experience in personnel.

**SCED 631 THE COMMUNITY COLLEGE (3)** Historical development; purposes and goals; curriculum evaluation; finance; accreditation and trends; state and national patterns; current student needs. Prerequisite: consent of instructor.

**SCED 633 CURRICULUM AND INSTRUCTION IN THE COMMUNITY COLLEGE (3)** Educational programs; curricula; instructional techniques; evaluative procedures; community involvement and societal expectations; concerns and trends affecting programs; objectives as related to institutional goals. Prerequisite: SCED 631 or equivalent.

**SCED 635 DISCIPLINE AND CLASSROOM MANAGEMENT IN SECONDARY SCHOOLS (3)** Theories of control; procedures and routines for efficient management; problems in urban and suburban teaching. Prerequisite: Teaching experience or completion of student teaching.

**SCED 643 THE ADMINISTRATION OF THE SECONDARY SCHOOL (3)** Principles and practices; administrator's roles and responsibilities; human relations and personnel management of the school unit and curriculum. Prerequisites: Three years teaching experience, teaching certification, and nine graduate credits in education.

**SCED 647 ADVANCED TEACHING AND LEARNING PROCESSES, SECONDARY (3)** Theory and research on models of teaching and learning, systems for analyzing modalities, including brain hemispheric preferences and metacognitive strategies. Pre-

requisite: Teaching experience or consent of instructor.

**SCED 649 TEACHING GIFTED STUDENTS IN THE SECONDARY SCHOOL**

**(3)** Characteristics of gifted adolescents; role of the gifted in society; educational programs, identification procedures, administrative arrangements, curriculum; and methodology. Prerequisite: Consent of instructor.

**SCED 651 TECHNIQUES FOR TEACHING SPECIAL NEEDS ADOLESCENTS AND ADULTS**

**(3)** Assessment, diagnostic and remedial strategies, motivational devices as well as techniques for developing and maintaining a positive self-concept in adolescents and adults of below-average mental ability as defined under PL 94-142. Prerequisites: Teaching experience, student teaching, or consent of instructor.

**SCED 670-674 SPECIAL TOPICS IN SECONDARY EDUCATION (1-3)**

In-depth study of a selected topic. Specific requirements and prerequisites vary as designated by the department. Prerequisite: Consent of graduate program director.

**SCED 683 STAFF DEVELOPMENT AND SUPERVISORY PRACTICES IN SECONDARY SCHOOLS**

**(3)** Past, current and emerging roles of the supervisor; theories and practices. Prerequisite: Current teaching experience.

**SCED 695 INDEPENDENT STUDY IN EDUCATION: SECONDARY (1-4)**

Independent study in selected areas of secondary education. Prerequisites: Graduate standing and consent of graduate program director.

**SCED 696 DIRECTED READING IN SECONDARY EDUCATION (1-4)**

Independent reading in selected areas of secondary education. Prerequisites: Graduate standing and consent of graduate program director.

**SCED 731 FIELD EXPERIENCES IN ADOLESCENT AND ADULT LEARNING DISABILITIES**

**(3)** Analysis of learn-

ing problems of selected secondary school pupils and adults who are learning disabled. Teacher assessment, diagnosis, design of remedial activities, evaluation strategies and practicum report. Prerequisites: one course in learning disabilities, mainstreaming or permission of instructor.

**SCED 741 CURRICULUM DEVELOPMENT IN THE SECONDARY SCHOOL**

**(3)** Principles and practices; significant historical and contemporary influences; objective, content, and evaluation; trends; teachers as curriculum developers and implementors. Prerequisite: Consent of instructor.

**SCED 751 SEMINAR IN MIDDLE SCHOOL CURRICULUM**

**(3)** Curriculum designs and programs; organization for instruction; teacher preparation programs; guidance and nature of the transescents; community involvement; evaluation. Prerequisite: Course on the middle school area or middle school teaching experience.

**SCED 753 SEMINAR IN SECONDARY SCHOOL CURRICULUM**

**(3)** Theories, research, and evaluation; analysis of present programs; rationale for program development and change. Prerequisite: Graduate course in curriculum.

**SCED 770-774 SPECIAL TOPICS IN SECONDARY EDUCATION (1-3)**

In-depth study of a selected topic. Specific requirements and prerequisites vary as designated by the department. Prerequisite: consent of graduate instructor.

**SCED 779 SEMINAR IN SECONDARY SCHOOL SOCIAL STUDIES**

**(3)** Current research, trends, practices, issues, content, materials, and problems. Prerequisite: Consent of instructor or prior teaching experience in social studies.

**SCED 781 SEMINAR IN SECONDARY AND ADULT EDUCATION**

**(3)** Current trends, issues, problems in secondary and adult education; quantitative/qualitative investiga-

tion of selected topics. Prerequisites: 27 hours of graduate work, including EDUC 761.

**SCED 797 INTERNSHIP IN SECONDARY ADMINISTRATION/SUPERVISION (3)** Supervised field experience in secondary school settings, focusing on roles and responsibilities of administrators and supervisors. Prerequisites: Good standing in a graduate program; completion of 15 hours in approved program, including SCED 643, SCED 683.

**SCED 898 MASTER'S THESIS IN SECONDARY EDUCATION (6)**

**SCED 899 THESIS CONTINUUM (1)**

## **SOCIOLOGY (SOCI)**\_\_\_\_\_

**SOCI 511 INDIVIDUAL AND SOCIETY (3)** A social psychological approach to the interrelationships of the individual and his/her social and cultural environment; behavioral characteristics resulting from social experience. Prerequisite: SOCI 101.

**SOCI 515 COMMUNICATIONS AND SOCIAL ORDER (3)** Role of communications in social control; coercion, manipulation and enlightenment in society through primary and secondary communication. Prerequisite: SOCI 101.

**SOCI 522 SOCIOLOGY OF WAR AND PEACE (3)** A broad ranging examination of a variety of issues related to war and peace from a sociological perspective ... the nature and causes of war, behavior in battle, effects of war on society, mechanisms of security peace, the military as an organization, the relationship between armed forces and society. Prerequisite: SOCI 101.

**SOCI 523 SOCIAL CHANGE (3)** A sociological analysis of the sources, processes and consequences of social change. Prerequisite: SOCI 101.

**SOCI 525 COLLECTIVE BEHAVIOR (3)** Study of unorganized and organized groups and their impact on society; crowds,

mobs, riots and other processes of disruptive and constructive change. Prerequisite: SOCI 101.

**SOCI 527 URBAN SOCIOLOGY (3)** Survey of the theoretical and sociological conceptualizations of modern Western industrial cities. Prerequisite: SOCI 101.

**SOCI 529 DEMOGRAPHY (3)** Social, economic, and political problems related to changes, distribution and movement population; analysis of contemporary population trends in the U.S. and the world. Prerequisite: SOCI 101.

**SOCI 531 ORGANIZATIONS (3)** Structure and functioning of large scale organizations; formal and informal aspects of bureaucracies in business, government, politics, education and other institutional spheres of society. Prerequisite: SOCI 101.

**SOCI 532 SOCIOLOGY OF OCCUPATIONS AND PROFESSIONS (3)** Sociological literature on career choice and training patterns of occupational success and failure, professionalization process as it affects all occupations, role conflicts, regulation of behavior by the occupation and profession itself. Prerequisite: SOCI 101.

**SOCI 533 POLITICAL SOCIOLOGY (3)** Contemporary relevance of the fundamental ideas regarding the relationship of the social and political systems; the significance of social and political democratization; class struggles and revolution; the influence of government bureaucracy. Prerequisite: SOCI 101.

**SOCI 534 INDUSTRIAL SOCIOLOGY (3)** Sociological analysis of corporate and labor organization; internal organization; relationship to each other; impact on the workers in them; relationship to government and the total society. Treats issues such as changing managerial techniques, worker discontent and conditions for organizational and technological innovation. Prerequisite: SOCI 101.

**SOCI 535 MEDICAL SOCIOLOGY (3)** A study of social and cultural perspectives on

illness; demographic trends; the health professions; institutions for the delivery of health care services. Prerequisite: SOCI 101.

**SOCI 539 COMMUNITY ORGANIZATION (3)** The organization of the community as a vehicle for identifying and meeting human needs; processes and techniques of community planning and development, traditional and contemporary. Prerequisite: SOCI 101.

**SOCI 541 CLASS, STATUS AND POWER (3)** An examination of major theories and significant research on socially structured inequality in modern and traditional societies. Prerequisite: SOCI 101.

**SOCI 543 MINORITY GROUPS (3)** An examination of inter-group life as an aspect of society; conflicts between races, ethnic groups, and minorities; prejudice, segregation and integration. Prerequisite: SOCI 101.

**SOCI 550 SOCIOLOGY OF AGING (3)** Examination of social factors in aging from the viewpoint of the individual, the group and society; socialization and alienation; demographic aspects of aging; societal definitions, norms, values, dilemmas, and responses to the aging; evaluation of research in social gerontology. Prerequisite: SOCI 101.

**SOCI 551 SOCIAL DEVIANCE (3)** Deviance as an aspect of social living; the problem of understanding conformity and deviance; identification of deviants; society's response to deviant behavior. Prerequisite: SOCI 101.

**SOCI 553 CRIMINOLOGY (3)** The nature of crime; factors underlying criminal behavior; police, courts, law, and correctional institutions. Prerequisite: SOCI 101.

**SOCI 554 INTRODUCTION TO CRIMINAL JUSTICE (3)** The history, the present structure, the functions and the contemporary problems of the police, prosecution, courts, corrections, probation and parole. In addition, a brief introduction to law as an ele-

ment of social control will be given. Prerequisite: SOCI 101.

**SOCI 555 JUVENILE DELINQUENCY (3)** A study of delinquency; the process of socialization and delinquent behavior in society; prevention and treatment of delinquency. Prerequisite: SOCI 101.

**SOCI 556 CORRECTIONS IN AMERICA (3)** The analysis of agencies and programs designed for the custody and supervision of individuals convicted of crimes. The primary focus will be on adult institutions and community corrections. Prerequisite: SOCI 353, SOCI 354 or SOCI 355.

**SOCI 557 SOCIAL WELFARE (3)** Sociological analysis of social welfare institutions and the functions they perform within modern societies. Prerequisite: SOCI 101.

**SOCI 558 SOCIOLOGY OF DEATH, DYING AND BEREAVEMENT (3)** Examination of present social considerations on death including demographic, attitudinal and ritualistic variables; death education through the life cycle; structure of the grief process; impact of terminal illness on the patient and the family; ethical issues surrounding euthanasia and suicide. Prerequisite: SOCI 101.

**SOCI 559 SOCIAL GERONTOLOGY (3)** The study of the life cycle and the social significance of aging as well as the contemporary issues in social gerontology. Prerequisite: SOCI 101.

**SOCI 560-569 TOPICS IN SOCIOLOGY (3)** An examination of current topics in sociology designed for junior and senior majors. The content of the source will depend upon mutual faculty and student interest. Prerequisites: SOCI 101 and six additional hours of Sociology.

**SOCI 570-579 SPECIAL TOPICS IN SOCIOLOGY (3)** An examination of current topics in sociology designed for junior and senior majors. The content of the source will

depend upon mutual faculty and student interest. Prerequisites: SOCI 101 and six additional hours of Sociology.

### **SOCI 581 SOCIOLOGICAL THEORY**

**(3)** Major systems of sociological theory; the works, assumptions, and implications of major European and American schools. Prerequisites: Junior standing; SOCI 101; nine additional hours of Sociology.

### **SOCI 582 RESEARCH METHODS (3)**

A consideration of methodology of sociological research; the various steps in conducting research projects, from statement of the problem to final analysis of data. Prerequisites: SOCI 101; nine additional hours of SOCI; either PSYC 111 or MATH 231.

### **SOCI 585 SEMINAR IN SOCIOLOGY**

**(3)** Capstone application of ideas, methods, and facts learned in previous sociology courses. Prerequisites: SOCI 101, three upper level SOCI courses, and senior standing or permission of the instructor.

### **SOCI 591-592 PRACTICUM IN SOCIOLOGY I, II (3, 3)**

Supervised experience in work setting which facilitates understanding of roles and relationships relevant to sociological inquiry and application of sociological knowledge. Students may elect to take one semester for three credits (591) or two semesters for three credits each (591-592), in one agency both semesters or in a different agency each semester. No more than three credits may be earned in a semester save with consent of the chair which will be granted only when agency requirements and student needs make it appropriate. Prerequisite: SOCI major; Junior standing and consent of practicum .

### **SOCI 595 INDEPENDENT RESEARCH**

**(3)** supervised research and sociological investigation involving library and/or field experiences, and culminating in a written report. Prerequisites: SOCI 381, SOCI 391 and consent of instructor.

## **SPANISH (SPAN)**

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### **SPAN 502 SPANISH LINGUISTICS (3)**

The linguistic structure of the Spanish language with an introduction to transformational grammar. Conducted in Spanish. Prerequisite: SPAN 301, SPAN 302, or equivalent.

### **SPAN 511 NINETEENTH CENTURY SPANISH NOVEL I (3)**

Emphasis will be given to Benito Perez Galdos and Pio Baroja. Conducted in Spanish. Prerequisite: SPAN 321 or SPAN 322. (Not open to those who completed SPAN 471.)

### **SPAN 512 CONTEMPORARY SPANISH NOVEL (3)**

Emphasis on such writers as Cela, Sender, Delibes and Goytisolo. Conducted in Spanish. Prerequisites: SPAN 321, SPAN 322, or equivalent. (Not open to those who completed SPAN 472.)

### **SPAN 517 THE GOLDEN AGE IN SPANISH LITERATURE I (3)**

Principal attention to Cervantes, Tirso de Molina, Lope de Vega, and Ruiz de Alarcon; Gongora and his role. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

### **SPAN 519 LITERATURE OF THE CUBAN REVOLUTION (3)**

A study of the literature of the Cuban Revolution in its historical and ideological content. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

### **SPAN 531 NINETEENTH CENTURY SPANISH LITERATURE (3)**

The main literary movement of the century: neo-classicism, romanticism, realism, naturalism, and special emphasis on "costumbrismo." Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

### **SPAN 536 NINETEENTH CENTURY SPANISH AMERICAN LITERATURE II**

**(3)** Principal works of the major writers from 1860 to 1900. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 544 TWENTIETH CENTURY SPANISH-AMERICAN LITERATURE II (3)** The Contemporary Period. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 552 SPANISH POETRY II (3)** Emphasis on the poets of the generation of 1927; Pablo Neruda, and Vicente Aleixandre. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 562 CONTEMPORARY SPANISH DRAMA (3)** Contemporary playwrights such as Casona, Usigli, and Vallejo. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 570-579 SPECIAL TOPICS IN SPANISH (3)** Discussion of a central topic with changing emphasis from year to year. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 580 USE OF AUDIO-VISUAL TECHNIQUES IN MODERN LANGUAGE TEACHING (3)** Principles of design and components of communication will be presented. Demonstrations on basic materials production will be given. Students will be required to make materials and show how their materials can be used in foreign language instruction. Prerequisite: Teaching experience or consent of the department chair.

**SPAN 581 SPANISH SHORT STORY (3)** The short story in Spain and Spanish America with emphasis on twentieth century authors. Conducted in Spanish. Prerequisite: SPAN 321, SPAN 322, or equivalent.

**SPAN 591-592 DIRECTED READINGS IN SPANISH (1-3)** Reserved for superior students under the guidance of a departmental advisor. Conducted in French. Prerequisites: Graduate standing.

**SPAN 605 SPANISH STYLISTICS (3)** Intensive and detailed analysis of selected texts. Prerequisite: Undergraduate degree in Spanish or consent of department chairperson.

**SPAN 636 POETRY AND DRAMA OF THE SPANISH GOLDEN AGE (3)** Graduate study of major writers of the Siglo de Oro. Conducted in Spanish. Prerequisite: Undergraduate degree in Spanish or consent of department chairperson.

**SPAN 653 MIGUEL DE CERVANTES (3)** Don Quijote de la Mancha and the Novelas Ejemplares, reading and detailed analysis. Prerequisite: Undergraduate degree in Spanish or consent of department chairperson.

**SPAN 670-679 SPECIAL TOPICS IN SPANISH LANGUAGE: LITERATURE AND CIVILIZATION (3)** Discussion of a central topic with changing emphasis from year to year. Prerequisite: Undergraduate degree in Spanish or consent of department chairperson.

**SPAN 685 SEMINAR IN MODERN LITERATURE (3)** Discussion of a figure or topic in modern Spanish or Spanish-American. Prerequisite: Undergraduate degree in Spanish or consent of department chairperson.

## **SPECIAL EDUCATION (SPED) —**

**SPED 525 TESTS AND MEASUREMENT FOR MILDLY/MODERATELY HANDICAPPED CHILDREN (3)** Assessment Techniques: philosophical rationale; current research; intervention strategies for mildly and moderately handicapped children. Prerequisites: 6 hours PSYC; 9 hours SPED or consent of instructor.

**SPED 527 CURRICULUM AND METHODS IN SOCIAL, EMOTIONAL AND MOTOR DEVELOPMENTS: SPECIAL NEED INDIVIDUALS K-12 (3)** Curriculum theory, research; instructional techniques for special needs children and adolescents, including non-academic aspects of the curriculum. Prerequisites: 6 hours PSYC; 9 hours SPED.

**SPED 541 SPECIAL NEEDS OF THE HANDICAPPED CHILD (3)** Characteristics of the following handicapping conditions

as they may affect learning in a classroom setting: visual impairment, hearing impairments, speech and language disorder, emotional disturbance and physical and/or chronic medical conditions. Includes methods of tailoring educational programs to meet these conditions. Prerequisites: Six credits Psychology; six credits Early Childhood Education or Elementary Education. Fall.

**SPED 581 METHODS AND MATERIALS FOR TEACHING THE VISUALLY IMPAIRED (3)** Designed to examine recognized methods, materials, and programs for teaching children who are visually impaired. Offered in cooperation with Maryland School for the Blind. Prerequisites: SPED 483 and consent of instructor.

**SPED 583 BRAILLE READING AND WRITING (3)** Designed to meet needs of teachers who will be teaching the visually impaired to read and write braille. Consent of instructor.

**SPED 601 SPECIAL EDUCATION: ISSUES IN TRANSITION FROM SCHOOL TO ADULT LIFE (3)** Methodologies for transition for students with disabilities from school to employment and adult life. Prerequisite: SPED 301 or consent of instructor.

**SPED 603 INFORMAL TEST AND MEASUREMENT FOR STUDENTS WITH DISABILITIES K-12 (3)** Assessment, diagnosis, prescriptive techniques; procedures, administration, interpretation, programming. Prerequisites: SPED 301 and consent of SPED .

**SPED 605 WORKING WITH FAMILIES OF STUDENTS WITH DISABILITIES (3)** Communication skills, human relations, parent counseling and conferencing. Prerequisites; SPED 301 and consent of SPED .

**SPED 607 CURRICULUM/METHODS OF CLASSROOM MANAGEMENT FOR STUDENTS WITH DISABILITIES (K-12) (3)** Theoretical foundations; develop-

ment of practical intervention. Prerequisites: SPED 301 and consent of SPED .

**SPED 637 MAIN STREAMING FOR THE CLASSROOM TEACHER (3)** Background and legal bases; programs; methods and materials for special needs children; emphasis on the regular classroom. Prerequisite: Student teaching or consent of instructor.

**SPED 641 EDUCATION OF STUDENTS WITH DISABILITIES: CURRICULUM AND METHODS OF INSTRUCTION (K-12) (3)** Theory; research; instructional and behavioral strategies; classroom management; crisis intervention; parent conferencing. Prerequisite: ECED 509; SPED 441 or equivalent; six credits in PSYC.

**SPED 670-679 SPECIAL TOPICS IN SPECIAL EDUCATION (1-3)** Studies in selected content areas tailored to student needs. Prerequisite: Vary according to area of concentration. Consent of department.

**SPED 741 INTERNSHIP - STUDENTS WITH DISABILITIES (3)** Placement in a special education facility or special education agency according to student interest and background. Prerequisites: Six credits SPED; twelve credits (ECED); six credits PSYC and consent of department.

## **SPEECH LANGUAGE PATHOLOGY AND AUDIOLOGY (SPPA) \_\_\_\_\_**

**SPPA 525 INTRODUCTION TO AURAL REHABILITATION (3)** Options available for managing children and adults who are deaf or hard of hearing. Early intervention, communication strategies amplification options and psychosocial issues. Prerequisite: SPPA 321 and/or consent of the department.

**SPPA 545 PSYCHOSOCIAL ASPECTS OF DEAFNESS (3)** Educational, legal, philosophical, cultural, and political influences relating to the deaf/hard-hearing. Impact of per-lingual and postlingual deafness of an individual's social and psychological function-

ing. Prerequisite: SPPA 205 and/or consent of the department.

**SPPA 602 FOUNDATIONS OF COMMUNICATION: DEVELOPMENTAL PSYCHO LINGUISTICS (3)** Neurolinguistic and psycho linguistic aspects of normal language acquisition including the cognitive domain and multi-cultural variables in children from birth through school age. Prerequisite: Consent of department. Not open to those students who have taken SPPA 701.

**SPPA 603 NEUROANATOMY AND PHYSIOLOGY OF THE AUDITORY AND VESTIBULAR SYSTEMS (3)** Neurological structure and function of the peripheral and central auditory systems and the vestibular system. Prerequisite: Graduate standing and/or consent of the department.

**SPPA 604 ADULT NEUROGENIC LANGUAGE DISORDERS (3)** Neuro-anatomical models regarding language function, theories concerning brain function and localization of lesion following cerebral vascular accident and/or degeneration. Assessment and treatment of language deficits. Prerequisite: Graduate standing.

**SPPA 606 LANGUAGE DISORDERS IN CHILDREN (3)** Characteristics of language disorders, assessment and intervention techniques for children and adolescents including the culturally-linguistically different and specific disorder populations. Prerequisite: SPPA 602.

**SPPA 610 PHONOLOGY AND ARTICULATION (3)** Universal phonological principles and linguistic analysis. Assessment and treatment of phonological and articulation disorders. Prerequisite: Graduate standing and consent of department.

**SPPA 614 FLUENCY DISORDERS (3)** Information on the nature of fluency and the etiology and treatment of fluency disorders through the life-span. Prerequisites: Graduate standing and consent of department. Not open to those students who have taken SPPA 619.

**SPPA 620 VOICE DISORDERS IN CHILDREN AND ADULTS (3)** Anatomy and physiology of the vocal mechanism with discussion and identification of abnormal voice qualities. Techniques of treatment and counseling of clients with organic and functional voice disorders. Prerequisites: Graduate standing and consent of department. Not open to those students who have taken SPPA 615.

**SPPA 621 DIAGNOSIS OF DISORDERS OF THE AUDITORY SYSTEM (3)** Theory, methodology and interpretation of specialized audiometric procedures for differentiating pathologies of the auditory system, with consideration of the necessary equipment and medical aspects of management. Prerequisites: SPPA 321 and/or consent of department.

**SPPA 622 DIAGNOSTIC PROCESS IN SPEECH-LANGUAGE PATHOLOGY (3)** The diagnostic process in communication disorders of children and adults will include aspects of the process from a philosophy of assessment and information gathering to tools of assessment and individualized treatment planning. Prerequisites: Graduate standing and consent of department. Not open to those students who have taken SPPA 607.

**SPPA 626 ADULT NEUROGENIC SPEECH DISORDERS (3)** Neuroanatomical models regarding speech motor control. Theories concerning brain function and localization of urologic deficits following trauma or degeneration. Assessment and treatment of neurologically based speech disorders. Prerequisite: Graduate standing.

**SPPA 627 AUDITORY DISORDERS OF THE AGED (2)** Demographics and unique aspects of assessment and management of the aging process; auditory disorders of the aged and administrative considerations for service delivery. Prerequisites: Graduate standing and consent of department.

**SPPA 628 DYSPHAGIA (2)** Anatomy and physiology of normal and abnormal swallowing. Etiology, assessment, and treatment of

swallowing disorders. Prerequisite: SPPA 626 and/or consent of department.

**SPPA 634 COMMUNICATION DISORDERS OF MULTI HANDICAPPED CHILDREN (2)** Causes and characteristics of multi-handicapping conditions and communication assessment/intervention strategies for children (0-21 years). The role of the speech-language pathologist and audiologist on the interdisciplinary team. Prerequisites: Graduate standing and consent of department.

**SPPA 644 AUDIOLOGY SEMINAR - CURRENT TOPICS IN AUDITION (3)** Topics to be determined. Prerequisite: Consent of instructor.

**SPPA 645 AURAL HABILITATION/REHABILITATION (3)** Theories and techniques for the habilitation/rehabilitation of hearing impaired children and adults. Audio-logical management, legislation, hearing aids, cochlear implants, assistive devices, educational options, communication options, psychosocial issues and speech perception. Not open to students who have completed SPPA 623 or SPPA 625. Prerequisite: Graduate standing and/or consent of the department.

**SPPA 653 PEDIATRIC AUDIOLOGY (3)** Development of auditory system and auditory behavior provide a foundation for the audio logic management of the pediatric client. Survey of principles/techniques for identifying and evaluating auditory function in normal and special needs pediatric populations. Educational issues of placement and management of children with auditory disorders. Prerequisites: SPPA 321 and/or consent of department.

**SPPA 655 HEARING AID SELECTION (3)** Nature and types of amplifying systems used with the hearing impaired, electroacoustic characteristics, principles and methods of selection and usage of personal amplification systems. Prerequisites: SPPA 321 and/or consent of department.

**SPPA 670-679 SPECIAL TOPICS SEMINAR IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (3)** Investigation of particular topics in the fields of speech and language pathology and audiology. The topic will vary each semester the course is offered. Prerequisite: Varies with topic.

**SPPA 690 CLINICAL PRACTICUM (3)** Supervised clinical experience with communicatively impaired children and adults in the university clinical facility. Prerequisites: SPPA 416 (or equivalent); Graduate standing and/or consent of department.

**SPPA 705 PROFESSIONAL ISSUES IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (3)** Information on the organization, administration, and evaluation of speech-language pathology and audiology programs in universities, schools, and other settings. Professional roles in supervision, direct clinical service and consultation. Federal and state laws related to the special education process and Licensure will be presented. Prerequisites: Graduate standing and consent of department.

**SPPA 706 FAMILY-CENTERED EARLY INTERVENTION (2)** Theoretical & research information on the role of the parent(s) and other family members in the acquisition and development of communication abilities and their influence on the occurrence and maintenance of communication disorders. Nature of family units, multicultural families, and method of working with families to prevent, assess, and treat communication disorders in very young children (0-3 yrs.). Prerequisites: Consent of department and graduate standing. Not open to those students who have taken this title as Special Topics.

**SPPA 713 SEMINAR: RESEARCH DESIGN IN SPPA (3)** Scientific method as applied to research SPPA, evaluation of research designs, development and implementation of a research project, and organization, analysis and presentation of data. Prerequisites: Graduate standing and consent of department.

**SPPA 714 ALTERNATIVE/AUGMENTATIVE TECHNIQUES IN COMMUNICATION SYSTEMS (2)**

Compensatory or augmentative use of various non-speech communication modes with persons whose impairments prevent effective verbal communication. Prerequisites: Graduate standing and consent of department.

**SPPA 718 SPEECH PERCEPTION (2)**

Acoustical and perceptual aspects of speech including developmental aspects of perception and spectral characteristics of vowel and consonants. Not open to those students who have taken SPPA 618. Prerequisites: Graduate standing and consent of department.

**SPPA 731 LABORATORY: PSYCHOACOUSTICS, INSTRUMENTATION, CALIBRATION (3)**

Instrumentation, calibration considerations, and principles utilized in the psychoacoustic assessment of the human auditory system. Laboratory experiences will supplement classroom participation. Prerequisites: SPPA 321 and consent of department. Not open to those students who have taken SPPA 631.

**SPPA 743 SEMINAR IN NEUROLOGIC ASPECTS OF THE AUDITORY SYSTEM (3)**

Provides information on the bioacoustic and neurobiologic properties of the peripheral and central auditory systems and the audiometric procedures for diagnosis of auditory disorders of these systems. Prerequisite: SPPA 603 (Neuroanatomy & Physiology of the Auditory and Vestibular Systems) and/or consent of department.

**SPPA 745 ADVANCED CLINICAL PRACTICUM - ON CAMPUS (3)**

Supervised practicum experience includes the valuation and treatment of various types of speech, language and/or hearing disorders. Prerequisites: SPPA 487 and/or consent of department.

**SPPA 746 ADVANCED CLINICAL PRACTICUM - OFF CAMPUS (3)**

Clinical practice in the identification, assessment, and/or treatment of various types of speech, language, and/or hearing disorders in pro-

grams affiliated with TU Department of Communication Sciences and Disorders. Prerequisites: Full graduate standing, 50 clock hours (25 of which must be graduate hours), and consent of department.

**SPPA 747 ADVANCED CLINICAL PRACTICUM IN SCHOOLS (3)**

Advanced clinical practicum in school programs affiliated with TU for graduate students in speech-language pathology and/or audiology track(s). The experience includes the evaluation and treatment of various types of speech, language and/or hearing disorders. Prerequisites: Full admission, 50 clock hours (25 of which must be graduate hours), and consent of department.

**SPPA 751 SEMINAR IN INDUSTRIAL AND ENVIRONMENTAL AUDIOLOGY (3)**

Provide information on noise and its effects on the auditory system. Particular attention will be devoted to hearing conservation programs (may be taken by health and safety personnel). Prerequisites: SPPA 321 and consent of department. Not open to those students who have taken SPPA 651.

**SPPA 755 LABORATORY: ELECTROACOUSTIC CONSIDERATIONS AND MODIFICATIONS OF HEARING AIDS (3)**

Provides laboratory experience with instrumentation utilized in selecting, fitting and evaluating hearing instruments including personal amplifications systems, auditory trainers, and assistive listening devices. Prerequisites: SPPA 321 and/or consent of department.

**SPPA 796 INDEPENDENT STUDY IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (1-3)**

Investigation in selected area of Speech-Language Pathology and Audiology. Prerequisites: Graduate standing and consent of department.

**SPPA 797 DIRECTED READINGS IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY (1-3)**

Readings in particular topic in Speech-Language Pathology or Audiology. Prerequisites: Graduate standing and consent of department.

**SPPA 799 CLINICAL PRACTICUM CONTINUUM (3)** Advanced clinical practicum for student in the Speech Language Pathology and/or Audiology track(s) continuing in on off-campus practicum experiences previously taken for credit. Supervised practicum experience includes the evaluation and treatment of various types of speech, language and/or hearing disorders. Prerequisite: SPPA 745 and consent of department.

**SPPA 898 THESIS (6)** Original investigation using an acceptable research method and design conducted under the direction of a faculty committee. Prerequisite: SPPA 713.

**SPPA 899 THESIS CONTINUUM (1)**

## **THEATRE ARTS (THEA)**—————

**THEA 5XX-6XX THEATRE SYSTEMS (3)** A practical overview of technology.

**THEA 5XX-6XX THEATRE DESIGN TECHNIQUES (3)** The vocabulary and background needed to develop and communicate design concepts, to work collaboratively with other design artists, and to understand the needs of designing for different sizes and types of venues.

**THEA 580 ADVANCED STUDY IN THEATRE DESIGN (1-9)** Independent studio in costume, scenery or lighting design. May be repeated for a maximum of 9 credits. Prerequisite: consent of instructor.

**THEA 585 ADVANCED THEATRE WORKSHOP FOR SECONDARY SCHOOL TEACHERS (6)** Open to graduate students and undergraduate students of junior and senior standing who have had courses in the theatre and/or practical experience in theatre. May be taken for graduate or undergraduate credit. Students will work with high school students in theatre projects and will have opportunities to design and/or direct. Interested applicants should contact the Director of the Summer Theatre Workshop at the earliest opportunity, preferably June 1.

**THEA 593 ADVANCED STUDY IN THEATRE (1-9)** Independent study of an academic or creative nature. For majors only. May be repeated for a maximum of nine credits. Prerequisite: Approval of plan of study by instructor and director of theatre.

**THEA 6XX TEXT CONSTRUCTION (3)** Exploring a variety of means of developing theatrical text, with special attention to the relationship of language and structure.

**THEA 601 DRAMATURGY: INTERDISCIPLINARY (3)** Investigation of the theory and techniques of combining disciplines for performance. Considerations of the issues of interdisciplinary performance.

**THEA 602 DRAMATURGY: INTERCULTURAL (3)** Investigation of the theory and techniques of theatrical performance in various cultures, as well as forms which incorporate a variety of cultural practices. Consideration of the issues of "intercultural" performance.

**THEA 603 GRADUATE PERFORMANCE I (1-4)** Creating solo and collaborative performance by exploring language and environment through a variety of traditions, styles and techniques. Prerequisite: consent of the Graduate .

**THEA 604 GRADUATE COSTUME DESIGN I (2 OR 4)** Costume design through integrated seminars with directors, actors and designers to create original styles for productions. Prerequisite: Consent of instructor.

**THEA 605 PERFORMANCE: ENSEMBLE (1-4)** Creating collaborative performance by exploring language and environment through a variety of traditions, styles and techniques. May be repeated for up to 12 credits. Prerequisite: consent of Graduate .

**THEA 606 INTEGRATED VOICE AND MOVEMENT (3)** Inter-relationship of vocal production, physical alignment, dynamic movement, and affective expression. Prerequisite: Consent of instructor.

**THEA 607 SELF EMPOWERMENT IN THEATRE (3)** Historical and contemporary context of national and international ensembles, solo performance, and other alternatives for a life in theatre. Prerequisite: consent of program .

**THEA 675 RESEARCH METHODS (4)** Examining the text and context of performance, using a variety of theoretical methodologies. Prerequisite: Consent of the instructor.

**THEA 680-683 SPECIAL TOPICS (1-4)** In-depth study in a selected area dependent upon faculty and student interest. May be repeated for a total of no more than 16 credits. Prerequisites: consent of Graduate and student advisor.

**THEA 695 INDEPENDENT PROJECT IN THEATRE (1-8)** Independent project in research, acting, directing, or theatre production. May be repeated for a maximum of 8 credits. Prerequisite: consent of the instructor.

**THEA 7XX TEACHING INTERNSHIP** Opportunity for graduate students to work with and be mentored by an experienced teacher in a classroom setting.

**THEA 701 THEATRICAL PROSTHETICS (1-4)** Three-dimensional design and modeling. Prerequisite: Consent of the instructor.

**THEA 720 GRADUATE DIRECTING (3)** Development of directorial vision, emphasizing collaborative style and advanced problem solving including a directing activity.

**THEA 730 SOUND APPLICATION AND TECHNOLOGY (1-4)** Integration of MIDI systems, digital devices, and organic elements. May not be repeated. Prerequisites: Consent of Graduate and special permit.

**THEA 740 GRADUATE PROJECT LABORATORY (2)** Conceptualization, research, and development of a graduate performance project.

**THEA 750 GRADUATE PROJECT AND PERFORMANCE (1-4)** Execution of a graduate performance project. May be repeated for a total of no more than 16 credits. Prerequisite: Consent of Graduate Program Director.

**THEA 760 INTEGRATED GRADUATE SEMINAR (1-4)** Working with guest artists to understand and apply specific theatrical aesthetics. May be repeated for a total of no more than 16 credits. Prerequisite: Consent of Graduate Program Director.

**THEA 897 FINAL PROJECT (6)** Culminating creative process that includes a research paper, production component may be required.

## WOMEN'S STUDIES (WMST) ———

**WMST 532 WOMEN'S CULTURE AND CREATIVITY (3)** Study of the historical conditions influencing women's creativity, the nature of women's aesthetic achievements, and the emergence of new female cultural and artistic traditions. Prerequisite: Six hours in art or literature.

**WMST 535 WOMEN, WORK AND FAMILY (3)** Women's work examined historically and cross-culturally from an interdisciplinary perspective. Women's work in traditional societies, effect of industrialization on women's work in contemporary societies. Prerequisite: Three credits Social Science or History.

**WMST 536 WOMEN AND MEDICINE (3)** A study of how gender has influenced the structure, content, and practice of medicine in the 19th and 20th centuries with emphasis on disease theory and treatment, physicians' involvement in social policy, and focus on the history of nursing, women's entry into medical practice, and women's health movements past and present. Prerequisite: Three undergraduate credits in Women's Studies or social sciences.

**WMST 537 FEMINISM (3)** An examination of feminism as a set of ideas, and the systematic application of those ideas to achieve

political, social, and economic equality. Prerequisite: Three undergraduate credits in social sciences or in Women's Studies or consent of instructor.

### **WMST 538 WOMEN AND SEXUALITY**

**(3)** Examination of the politics of sexuality, the interaction between cultural definitions and evaluations of women's attempts to achieve sexual autonomy. Emphasis on how the meaning of sexuality changes over time and how women respond to these changes, and their effect on women. Prerequisite: Three undergraduate credits in women's Studies or social sciences.

### **WMST 539 REPRODUCTIVE TECHNOLOGIES AND THE FUTURE OF MOTHERHOOD**

**(3)** Reproductive science and contraceptive technologies effect; contemporary society, focusing on ethical and legal issues, and changing definitions of motherhood. Prerequisites: 2 science courses, or one math and one science course.

### **WMST 570 TOPICS IN WOMEN'S STUDIES**

**(3)** An interdisciplinary examination of selected issues, themes, or topics in women's studies. Variation in content in different semesters; may be re-elected. Prerequisite: One women's studies course or consent of instructor.

### **WMST 591 DIRECTED READING IN WOMEN'S STUDIES**

**(1-4)** Independent reading in women's studies with emphasis on interdisciplinary relationships. Topics selected by student in consultation with the instructor. May be repeated for a maximum of six credits. Prerequisites: 15 hours in inter-disciplinary or departmental Women's Studies courses; minimum 3.00 average in Women's Studies; consent of instructor and of Women's Studies.

### **WMST 596 PRACTICUM IN WOMEN'S STUDIES**

**(3 OR 6)** Field placement for students in agencies or organizations working on projects which serve women. May be repeated for credit, but only three credits may be counted in the minimum forty-five credits required in the General Studies major. Prereq-

uisites: Upper level or graduate standing; WMST 231; one other Women's Studies course and consent of instructor.

### **WMST 695 INDEPENDENT STUDY**

**(3)** Study and research including writing a research paper on a selected topic in Women's Studies. Prerequisites: Graduate standing; 15 undergraduate or 9 graduate credits in Women's Studies; consent of Women's Studies prior to registration.

## **WRITING (WRIT)** \_\_\_\_\_

### **WRIT 611 RHETORIC: THE PURSUIT OF ELOQUENCE**

**(3)** Concepts of rhetoric, from classical to contemporary, that have shaped persuasive and expository writing. Prerequisites: Two 600-level WRIT courses or consent of instructor.

### **WRIT 613 THEORY OF EXPOSITION**

**(3)** Exposition as an empirically based model for factual writing; conventions of diction, sentence form, paragraph, and organization; techniques of verifiability and probability; adaptability to different audiences, fields of knowledge, and public purposes; illogical and emotional distortions in expository writing. Prerequisite: Admission to MPW program or consent of instructor.

### **WRIT 615 HISTORY AND DEVELOPMENT OF PROSE STYLE**

**(3)** Theory of English prose style from the earliest times to the present. Prerequisite: Admission to MPW program or consent of instructor.

### **WRIT 617 EDITING**

**(3)** Study of fundamental editing theory and supervised practice in editing. Also practice in copy editing, exposure to electronic editing, overview of copyright and libel laws, and instruction in publication design and production. Prerequisite: Admission to a graduate program or consent of instructor.

### **WRIT 619 COMMUNICATION IN THE PROFIT/NON-PROFIT SECTORS**

**(3)** Communication process, with special empha-

sis on writing, within the profit/non-profit organization. Theories of organization. Management styles. Relationship of written messages to the function of climate of the profit/non-profit organization. Strategies of preparing written communication to meet internal and external needs. Prerequisite: Admission to MPW program or consent of instructor.

**WRIT 621 BUSINESS WRITING (3)**

Major forms of business and industrial writing, including correspondence, memoranda, short reports, and long reports. Emphasis on audience analysis and planning of written communication to meet audience needs. Prerequisites: Two WRIT 600-level courses or consent of instructor.

**WRIT 623 TECHNICAL AND SCIENTIFIC WRITING (3)**

An intensive workshop in developing and editing technical documents: instructions, feasibility studies, investigation reports, proposals, etc. Prerequisite: WRIT 619.

**WRIT 625 DESIGN, LAYOUT, AND PRODUCTION (3)**

A foundation for the writer wishing to master graphic communication. Students will create a portfolio of finished printing and tour studios, typesetters, and printing plants. Prerequisite: WRIT 617 or consent of instructor.

**WRIT 627 MODERN RHETORIC (3)**

Current theories of rhetoric and composition, with emphasis upon the cognitive and social aspects of writing; relationships between language and abstraction, conventions of discourse communities, and various approaches to communication in a pluralistic society. Prerequisite: Admission to MPW program or consent of instructor.

**WRIT 633 TEACHING COLLEGE COMPOSITION (3)**

Prepares graduate students for teaching writing in the two-year college or freshman writing at a four-year institution. Focuses on history, theories, and the practice of teaching writing. Prerequisites: Four core courses. Paired with 6XX tutoring or internship.

**WRIT 641 THEORY OF CREATIVITY**

**(3)** Current theory of creative process, its stages, and its relation to the central techniques of poetry and fiction. Focus on analyzing student writings as they embody creative techniques. Prerequisite: Admission to the MPW program.

**WRIT 647 WRITING POETRY (3)**

Poetry Writing Seminar. Analysis of student and published poetry, with attention to craft and readership. Overview of modern theories of poetics and poetry criticism. Survey of poetry markets and publishing procedures. Prerequisite: Any WRIT 600-level course or consent of instructor.

**WRIT 651 WRITING SHORT FICTION**

**(3)** Short-fiction workshop. Analysis of student and published fiction with attention to plot, narrative technique, characterization, readership. Survey of short-fiction markets and publishing procedures. Prerequisite: Any WRIT 600-level course or consent of instructor.

**WRIT 653 WRITING THE NOVEL (3)**

Workshop on the planning, writing, and publishing of the novel. Prerequisites: One WRIT 600-level course and consent of the instructor.

**WRIT 660 SEMIOTICS FOR THE PROFESSIONAL WRITER (3)**

Recognizing and interpreting the symbols, signs, and implied messages of cultural environments. Focus is on creating and controlling these elements in professional writing. Prerequisite: Any WRIT 600-level course or consent of instructor.

**WRIT 670-679 TOPICS IN WRITING**

**(3)** Specialized focus on particular formats, theories, or practices in professional writing. May be elected twice. Prerequisites: Two 600 level WRIT courses or consent of instructor.

**WRIT 672 RHETORICAL GRAMMAR**

**(3)** Study/analysis of grammar as an extension of rhetorical effectiveness. Practice in adapting grammatical structure to subject and purpose, to audience, to writer/audience relation-

ship. Prerequisite: Admission to MPW program or consent of instructor.

**WRIT 691 RESEARCH TECHNIQUES IN PROFESSIONAL WRITING (3)** Major sources of primary and secondary information; observation, interview, survey, controlled experiment, and library resources. Gathering, synthesizing and interpreting data using statistical analysis and computer programs. Prerequisite: Admission to MPW I techniques of poetry and fiction. Focus on analyzing student writings as they embody creative techniques. Prerequisite: Admission to the MPW program.

**WRIT 705 WRITING CREATIVE NON-FICTION (3)** Sustained practice in incorporating creativity into the content, form, voice, tone, style of students' vocational and avocational non-fiction prose. Prerequisite: WRIT 611, WRIT 615, or consent of instructor.

**WRIT 711 MANAGING A PROFESSIONAL JOURNAL (3)** Instruction and practice in managing a professional journal from manuscript processing to published article. Controlling manuscript flow; working with editors, authors, reviewers, and publisher; journal production processes. Prerequisite: Writ 671 or consent of instructor.

**WRIT 713 FREELANCE WRITING (3)** Freelance writing for magazines, newspapers, corporations, associations, and technical journals. Analyzing markets. Creating jobs. Understanding copyrights, contracts and agents. Prerequisite: WRIT 613 or consent of instructor.

**WRIT 729 CORPORATE COMMUNICATIONS CONSULTING (3)** Designing, marketing programs training writers in business and government. Finding clients, developing workshops, evaluating programs. Students engage in consulting activities. Prerequisite: Recommended WRIT 625 Design, layout and production.

**WRIT 730 WRITING REVIEWS (3)** Develop proficiency in writing and marketing reviews of books and other fine/performing arts

presentations. Emphasize reviewing strategies and avenues for publication. Discuss student reviews, critical stances, role of critic, and aesthetics. Rhetorical analysis reviews. Prerequisite: Any 600-level WRIT course or consent of instructor.

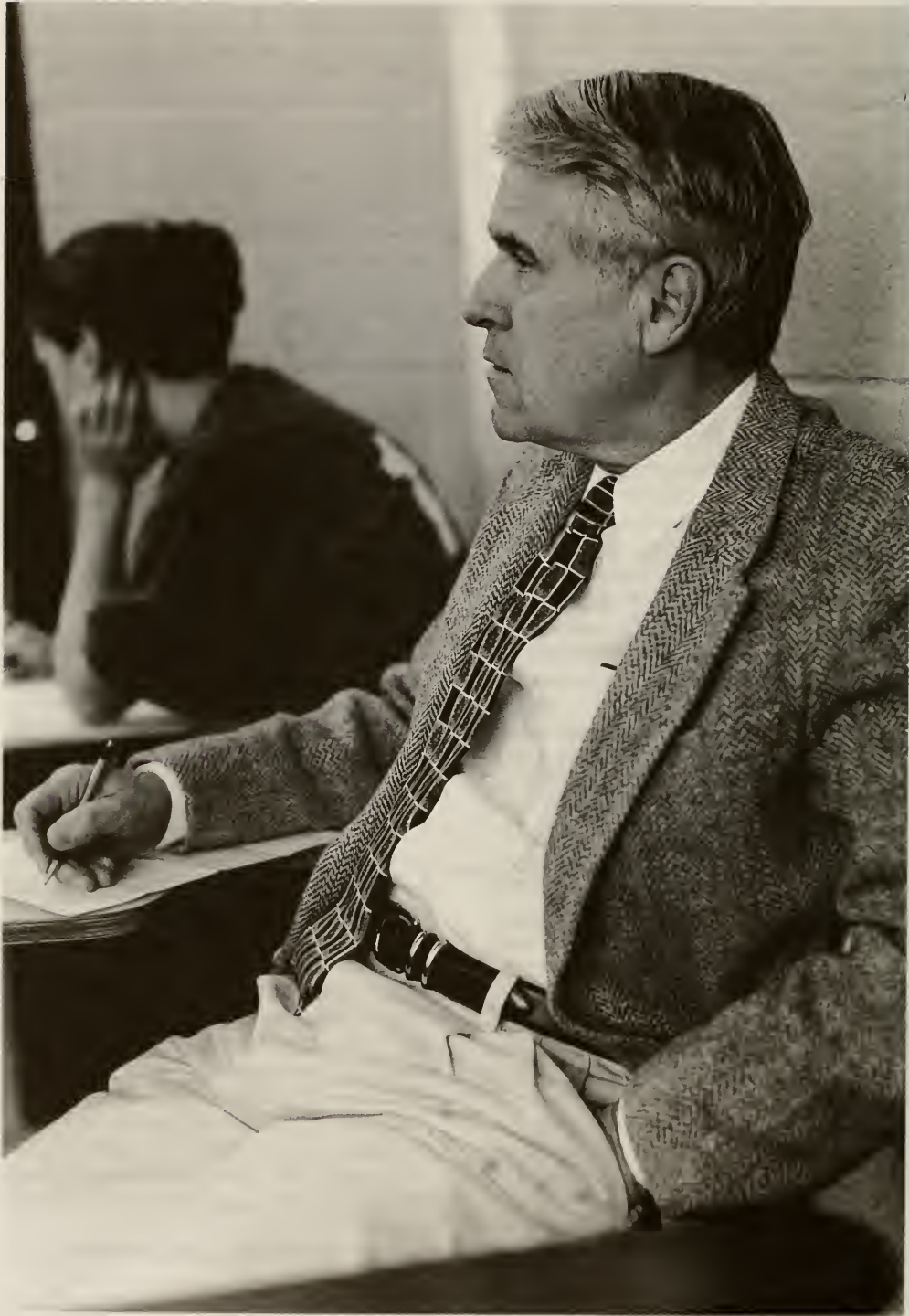
**WRIT 731 SCIENCE AND ITS PUBLIC AUDIENCE (3)** Addresses scientific writing as analyzable discourse, increasingly issue-oriented, public, and available to non-scientists. Choosing issues, writing queries and articles. No background in sciences necessary. Prerequisite: Admission to a graduate program or consent of instructor.

**WRIT 733 COMMUNICATION MANAGEMENT (3)** Introduction for professional writers to management of information in profit/non-profit organizations through computer systems. Concentration on techniques for identifying, gathering, storing, and accessing critical data for multiple sources and on strategies for translating data into usable information. No previous computer experience required. Prerequisite: Admission to MPW program or consent of instructor.

**WRIT 797 INTERNSHIP IN PROFESSIONAL WRITING (3)** Writing, editing, layout/design, or communications consulting under the supervision of professionals in a work setting. Course may be taken only once. Prerequisites: Minimum of 15 hours completed in the program with a 3.0 average, successful completion of qualifying examination, and special permit from program director.

**WRIT 898 THESIS (6)** Original writing of publishable quality, using skills emphasized in the coursework of the program. Content and design of project to reflect goals and interest of student. May be based on extensive library, laboratory, or field research, or may be entirely creative. Prerequisites: Completion of all coursework for M.S. in Professional Writing, 3.5 GPA, and consent of program director.

**WRIT 899 THESIS CONTINUUM (1)**



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- DANA ROTHLIBERGER, Assistant Professor, Music; B.M.Ed., M.M. East Texas State University; Ph.D. University of Maryland College Park (1983)
- FRANCES ROTHSTEIN, Professor, Sociology and Anthropology; B.A., Queens College; Ph.D., University of Pittsburgh (1974)
- JOSEPH R. RUDOLPH, JR., Professor, Political Science; B.A., M.A., Ph.D., University of Virginia (1986)
- RODERICK N. RYON, Professor, History; A.B., Western Maryland College; A.M., Ph.D., Pennsylvania State University (1965)
- LEV R. RYZHKOV, Assistant Professor, Chemistry; B.S., Stevens Institute of Technology; Ph.D., Brown University (1995)
- JEFFREY L. SANDERS, Professor, Psychology; B.A., Towson University; M.A., university of Texas; Ph.D., George Washington University (1968)
- STEPHEN SCALES, Visiting Assistant Professor, Philosophy; B.A., New School for Social Research; M.A., Ph.D., University of California at San Diego (1995)
- AUBREY G. SCARBROUGH, Professor, Biology; B.S., M.S., Arkansas State University

- sity; Ph.D., University of Illinois (1970)
- DAVID SCHAEFER, Assistant Professor, Physics; B.S., Towson State University; M.S., Ph.D., Purdue University (1995)
- CARL B. SCHMIDT, Professor and Chair, Music; B.A., Stanford University; M.M., Ph.D., Harvard University (1994)
- MYRON I. SCHOLNICK, Professor, History; B. A., American University; M.A., Ph.D., University of Maryland (1967)
- RALPH SCOTT, Professor, Geography and Environmental Planning; B.S., M.S., Florida State University; Ph.D., University of Georgia (1974)
- ERIK SCULLY, Associate Professor, Biology; B.S., Fordham University; Ph.D., University of Rhode Island (1978)
- WALTER SEABOLD, Visiting Assistant Professor, Political Science; A.B., University of Illinois; M.S., Ph.D., American University (1996)
- R. GUY SEDLACK, Professor, Sociology and Anthropology; A.B. Hamilton College; M.A., Ph.D., University of Maryland (1970)
- W. MICHAEL SEGANISH, Associate Professor, Accounting/Business Law; B.S., M.B.A., University of Maryland; J.D., University of Baltimore School of Law (1970)
- NORMAN SHEETS, Associate Vice President for Academic Affairs; Professor, Health Science; B.A., Glenville State College; M.A., Ed.D., West Virginia University (1969)
- BONG JU SHIN, Professor, Economics; B.A., University of Pusan; M.A., Ph.D., Ohio State University (1966)
- LAWRENCE H. SHIRLEY, Associate Professor, Mathematics; B.S., California Institute of Technology; M.Ed., University of Illinois; Ph.D., Ahmadu Bello University, Nigeria (1989)
- ROBERT E. SHOEMAKER, Professor, Biology; B.A., Carleton College; M.S., Ph.D., University of Minnesota (1967)
- MARTHA SIEGEL, Professor, Mathematics; B.A., Russell Sage College; M.A., Ph.D., University of Rochester (1971)
- DANIEL D. SINGER, Professor, Finance; Ph.D., The University of Colorado; M.S., The State University of New York; B.S., Rider College (1990)
- JAN SINNOTT, Professor, Psychology; B.S., St. Louis University; M.A., Ph.D., Catholic University (1978)
- BARBARA R. SLATER, Professor, Psychology; B.A., M.Ed., St. Lawrence University; Ph.D., Teachers College, Columbia University (1971)
- ROBERT L. SLEVIN, Associate Professor, Kinesiology; B.S., Ball State University; M.S. Baylor University; Ed.D., Louisiana State (1970)
- GREGORY K. P. SMITH, Visiting Assistant Professor, Kinesiology; B.S., Tennessee State University; M.Ed., Temple University (1995)
- LOUISE W. SMITH, Professor, Marketing; B.A. , University of Delaware; M.E., M.B.A., Harvard University; Ph.D., University of Maryland (1984)
- ROBERT F. SMITH, Professor, Elementary Education; B.S., M.A., Ph.D., Fordham University (1990)
- WILLIAM P. SMITH, Associate Professor, Management; B.S. University of Nebraska; M.S., Colorado State University; Ph.D., Arizona State University (1988)
- HOUSHANG H. SOHRAB, Professor, Mathematics; B.S., M.A., University of Paris, Paris, France; Ph.D., University of California (1984)
- JANET STERN SOLOMON, Professor and Vice Chair, Management; A.B., Syracuse University; M.B.A., University of Missouri at Kansas City; Ph.D., The George Washington University (1983)
- TRUDY L. SOMMERS, Associate Professor, Management; B.A., Hanover College, Indiana; M.S., Indiana University; Ph.D., University of Michigan (1988)
- THOMAS SPACHT, Professor, Music; B.M., Oberlin Conservatory; M.M. Syracuse University; D.M.A., Eastman School of Music (1977)
- RAJESHWAR P. SRIVASTAVA, Professor, Computer and Information Sciences; M.S.C., Allahabad University, India; M. Math, University of Waterloo; Ph.D., University of Idaho (1986)

- JAY STANLEY, Professor, Sociology and Anthropology; B.S., M.A., University of Tennessee; Ph.D., University of Maryland (1971)
- SANDRA CARSON STANLEY, Professor, Sociology and Anthropology; B.A., Towson University; M.A., Loyola College; Ph.D., University of Maryland (1982)
- LAMONT STEEDLE, Professor and Chair, Accounting; B.S., M.S., Ph.D., Pennsylvania State University (1990)
- STUART STEIN, Lecturer, Art; B.S., Towson State University; M.F.A., Maryland Institute College of Art (1996)
- LEONID STERN, Associate Professor, Mathematics; M.S., D.Sc., Technion-Israel Institute of Technology (1986)
- REGENA G. STEVENS-RATCHFORD, Associate Professor, Occupational Therapy; B.S., M.S., Ohio State University; Ph.D., University of Maryland (1980)
- BARBARA R. STEWART, Associate Professor, Accounting; A.B., Barnard College; M.A., Ph.D., Columbia University; C.P.A., State of Maryland (1988)
- RAYMOND A. STINAR, Professor and Chair, Kinesiology; B.S., M.S., Northern Illinois University; Ph.D., University of Maryland (1972)
- LOIS STOVER, Associate Professor, Secondary Education; B.A. College of William and Mary; M.A.T., University of Vermont; Ed.D., University of Virginia (1988)
- CYNTHIA SULFRIDGE, Assistant Professor, English; B.A., Carson-Newman College; M.A., University of Tennessee; Ph.D., The Johns Hopkins University (1978)
- TIMOTHY E. SULLIVAN, Associate Professor, Economics; B.A., M.A., Eastern Illinois University; M.S., Ph.D., University of Illinois. (1989)
- WEI SUN, Assistant Professor, Mathematics; B.A., Northeast Normal University, China; M.A., M.Ed., Ed.D., Columbia University (1996)
- THOMAS G. SUPENSKY, Professor, Art; B.F.A., The Ohio State University; M.Ed., Towson University (1968)
- LINDA M. SWEETING, Professor, Chemistry; B.S., M.A., University of Toronto; Ph.D., University of California, Los Angeles (197)
- ZOLTAN SZABO, Professor, Music; B.M., M.M., Peabody Conservatory; D.M., Indiana University (1979)
- FELIZ TABAK, Assistant Professor, Management; B.S., Istanbul Technical University; M.B.A., Bogazici University, Istanbul; M.S., University of Istanbul; Ph.D., Oklahoma State University (1995)
- JANE C. TAN, Associate Professor, Music; B.M., University of Santo Toma; M.S., Peabody Conservatory (1967)
- KATHERINE C. TARWATER, Assistant Professor, Speech and Mass Communication; B.A., M.A., Southern Illinois University at Edwardsville; Ph.D., the University of Kansas (1922)
- DIANNE E. TAYLOR, Assistant Professor, Nursing; RN; Diploma, Union Memorial Hospital School of Nursing; B.S., Southern Connecticut State College; M.S., Yale University; Ed.D., University of Maryland (1979)
- PRECHA THAVIKULWAT, Professor, Management; B.S., Ph.D., University of Minnesota (1988)
- VIRGINIA THOMPSON, Assistant Professor, Geography and Environmental Planning; B.A., M.A., University of Missouri; Ph.D., University of Oklahoma (1955)
- JOHN F. TINKLER, Assistant Professor, English; Ph.D., Queen's University, Canada (1994)
- JOSEPH J. TOPPING, Professor, Chemistry; B.S., LeMoyne College; M.S., Ph.D., University of New Hampshire (1970)
- JOHN R. TURNER, Associate Professor, Speech and Mass Communication; B.S., M.S., West Virginia University; Ph.D., Ohio University (1989)
- LEON UKENS, Professor, Physics; B.S., Fort Hayes Kansas State College; M.S., University of Northern Colorado; Ph.D., New York University (1972)
- JOHN G. VAN OSDELL, Professor and Chair, History; B.A., Ph.D., Tulane University (1967)
- RICHARD E. VATZ, Professor, Speech and Mass Communication; B.A., M.A., Ph.D.,

- University of Pittsburgh (1974)
- SPYROS VENNOS, Associate Professor, Finance; B.Sc.M.E., University of New Brunswick; M.Sc.Ae., D.Eng.Sc., Reneselaer Polytechnic Institute; M.B.A., Graduate Wharton, University of Pennsylvania; M.Sc.Finance, M.Sc.Economics, University of Baltimore (1976)
- DAVID E. VOCKE, Professor and Chair, Secondary Education; B.S., M.S., Miami University; Ph.D., University of Iowa (1989)
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- ROBERT WALL, Professor, Reading, Special Education and Instructional Technology; B.S., Iowa State University; M.A., Kent State University; Ph.D., University of Maryland (1966)
- ESTHER WANGARI, Assistant Professor, Women's Studies; B.A., Warren Wilson College; M.A., Ph.D., The New School for Social Research (1996)
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- JOHN W. WEBSTER, Associate Professor, Psychology; A.B., Ed.M., Ed.D., Rutgers University (1972)
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- STEVEN S. WEISS, Associate Professor, Speech and Mass Communication; B.A., University of Iowa; M.F.A., Syracuse University (1986)
- DEITRA WENGERT, Professor, Health Science; B.S., Bowie State College; M.Ed., Towson University; Ph.D., University of Maryland (1979)
- JOHN M. WESSNER, Assistant Professor, Physics; A.B., Amherst College; M.S.T., Wisconsin State University at Superior; Ph.D., Montana State University (1973)
- EDYTH WHEELER, Visiting Assistant Professor, Early Childhood Education; B.A., Duke University, M.Ed., Ph.D., George Mason University (1996)
- EVANGELINE A. WHEELER, Assistant Professor, Psychology; B.S., Howard University; Ph.D., University of California, Berkeley (1994)
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- LAWRENCE WIMMERS, Assistant Professor, Biology; B.S., University of Dayton; Ph.D., Cornell University (1995)
- DONALD R. WINDLER, Professor, Biology; B.S., M.A., Southern Illinois University; Ph.D., University of North Carolina (1969)
- ALAN S. WINGROVE, Professor, Chemistry; B.S., University of California, Berkeley; Ph.D., University of California, Los Angeles (1973)
- ROSEMARY H. WITTSTADT, Assistant Professor, Nursing; RN, Diploma, St. Agnes Hospital School of Nursing, B.S.N., M.S., University of Maryland at Baltimore, Ed.D., University of Maryland at College Park (1978)
- GUY H. WOLF, II, Associate Professor, Sociology and Anthropology; A.B., M.A., University of Alabama; Ph.D., The Catholic University of America (1969)
- WING-CHUN WONG, Assistant Professor, Philosophy; B.A., University of Michigan, Ann Arbor, M.A., Ph.D., University of Illinois, Urbana-Champaign (1993)
- GARY WOOD, Associate Professor, English; B.A. Westminster College; M.A., Ph.D., University of Pittsburgh (1971)
- TAMARA WOROBY, Professor, Economics; B.A., University of Regina; M.A., Ph.D., Queens University, Ontario, Canada (1978)
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 MAUREEN YARNEVICH, Assistant Professor, Mathematics; B.S., University of Hartford; M.S., Ph.D., The American University (1994)  
 JUNE YUM, Associate Professor, Speech and Mass Communication; B.A., Seoul National University; M.A., University of Hawaii, Ph.D., University of Southern California (1989)  
 DAVID ZANG, Assistant Professor, Kinesiology; B.A., Wittenburg; M.S., Penn. State University; Ph.D., University of Maryland (1995)

H. HARRY ZHOU, Associate Professor, Computer and Information Sciences; M.S., Ph.D., Vanderbilt University (1989)  
 JAY J. ZIMMERMAN, Associate Professor, Mathematics; B.A., Knox College, M.S., Ph.D., University of Illinois (1989)  
 SALVATORE M. ZUMBO, Associate Professor, Modern Languages; B.A., M.A., University of Akron; Ph.D., University of Arizona (1989)  
 STANLEY ZWEBACK, Assistant Professor, Psychology; B.A., Trenton State College; M.Ed., Rutgers University; Ph.D., University of Maryland (1970)





# Appendix A

## CAMPUS FACILITIES

### ACADEMIC BUILDINGS

**STEPHENS HALL** - This distinctive Jacobean building, constructed in 1915, has long been a landmark in the Baltimore area. Departmental and faculty offices as well as classrooms and laboratories of the College of Business and Economics, Mathematics and Computer and Information Sciences Departments are housed in this building. A 733-seat theater capable of supporting light opera and musicals is also located in Stephens Hall.

**STEPHENS ANNEX** - This modular building was constructed in 1985 to provide office space during the renovation of Stephens Hall. It currently provides overflow faculty office space for the Departments of Communications Sciences and Disorders, Mass Communication, Mathematics, Computer and Information Sciences and Dance.

**VAN BOKKELEN HALL** - A classroom building for the departments of communication sciences and disorders and speech and mass communication, this facility contains therapy rooms for speech pathology and audiology majors, as well as a production studio for rehearsing radio and television broadcasts.

**LINTHICUM HALL** - Completed in 1967 and one of the largest classroom buildings on campus, it houses the departments of English, modern languages, history, philosophy, geography, sociology, political science, and economics, and associated offices.

**SMITH HALL** - First occupied in 1965, the building was expanded in 1976 to 223,285 square feet to house the departments of biology, chemistry, physics and science education. Included are plant growth chambers, greenhouses, reach-in environmental chambers, and aquarium room with aquatron, and controlled environmental animal rooms in addition to various classrooms and class laboratories. The Watson-King Planetarium is on the top floor.

**BURDICK HALL** - Completed in 1968, it houses the departments of nursing, occupational therapy, health sciences, and dance, and it con-

tains facilities for intramural sports, an Olympic sized swimming pool, classrooms, dance studios, three gymnasiums and various training and dressing rooms.

**TOWSON CENTER** - The 100-acre physical education complex houses the physical education and athletics departments and includes an arena, an all-weather track, 10 tennis courts with lighting, and separate fields for football, lacrosse, baseball, soccer, field hockey and softball. The building includes an arena with 165,000 square feet of floor space, six classrooms, a research laboratory, a curriculum center, student and faculty lounges, indoor archery and golf ranges, weight rooms, training areas and facilities, fencing, wrestling and gymnastic rooms, open teaching areas, five men's varsity locker rooms, four women's varsity locker rooms, four men's visiting team rooms, three women's visiting team rooms, six handball courts, four squash courts, two doubles squash courts, and a 60-foot long elevated press box.

**LIDA LEE TALL** - Currently housed in LLT are the Council Day Care Demonstration and Training Center, the Student Day Care Center, the Aliza Brandywine Center for Parent-Infant Development and offices, classrooms and laboratories of the Occupational Therapy Department.

**ALBERT S. COOK LIBRARY** - This modern five-story building was completed in 1969. It is a designed to shelve 600,000 volumes and provides seating for 600 students. Towson's long history is reflected in the extensive collections of bound volumes, reference works, and substantial holdings on microfilm. The Academic Computing Center is located on the ground floor.

**MEDIA CENTER** - This building houses the offices of equipment circulation, information retrieval, television productions, cinematography by production, graphics, film loan services, still photography and audio productions and electronic repairs, constituting one of the best equipped audiovisual centers in the state. The campus radio station, WCVT-FM, is located in this building.

**FINE ARTS CENTER** - a \$6.5-Million building opened in 1973, houses the department of art, music and theatre arts, as well as a main stage theatre, a studio theatre, concert hall, the Holtman Art Gallery and the Roberts Room, which displays the university's extensive Asian Art Collection.

**HAWKINS HALL** - Part of a three-building complex, it houses the elementary, secondary and early childhood education departments. Named for the former president, Earle T. Hawkins, it is equipped with large, attractive classrooms which can be sectioned into several smaller rooms. Television monitors are capable of recording activities in Lida Lee Tall. Also included in the wing is a reading center, testing modules, and an independent production area with learning carrels.

**PSYCHOLOGY BUILDING** - Part of the three-building complex that contains Hawkins Hall, it houses the psychology department, including learning laboratories, animal laboratories, statistics laboratories and an auditorium with learning cubicles.

**LECTURE HALL** - Part of the three-building complex that contains Hawkins Hall and the Psychology Building, it is equipped with broad space, a large electronic screen, and adjacent seminar rooms. Television cameras connect it with Hawkins Hall and the Psychology Building.

## RESIDENCE HALLS

**RESIDENCE TOWER** - This high-rise residence hall houses 463 students. It includes lounge areas, classroom space, conference rooms and recreation areas.

**NEWELL HALL** - The first dormitory built on the university campus, housing 220 students, it has been renovated to an arrangement of double-loaded corridors to include small cluster living units. The units are self-contained to include small lounges, bathrooms and two or three student bedrooms. The building also includes the recently remodeled dining facilities, a recreation area, lounge and snack bar.

**RICHMOND HALL** - This is the second building erected for student housing and is adjacent to Newell Hall. Its arrangement is similar to that of Newell Hall, and it houses 122 students.

**WARD AND WEST HALL** - Built in 1951, these twin residence halls were renovated in 1985. Air-conditioning was added to Ward Hall in 1986 and West Hall in 1987. The halls house both men and women, and each can accommodate about 57 students.

**PRETTYMAN AND SCARBOROUGH HALLS** - Built around a court garden, these twin residence halls, completed in 1956 and 1964, provide rooms for 164 students each.

**THE GLEN RESIDENCY COMPLEX** - A complex consisting of four (4) residence towers and a dining hall connected together by a landscaped patio/courtyard. A total of 1684 students, both male and female, can be housed in these modern motel style accommodations and can be served in the 640 seat dining facility overlooking "The Glen."

**THE TOWSON RUN APARTMENTS** - This apartment complex which opened in August of 1990 was designed to house 420 people in an apartment-type setting. It will be open for both students or students and their spouses and features most of the conveniences of apartment style living.

## OTHER BUILDINGS

**UNIVERSITY UNION** - Completed in 1971, this \$5-million structure is designed with two fronts. The three-story structure houses food service facilities, placement office, academic advising and tutorial center, student lounge areas, meeting rooms, and varied recreational areas including bowling, billiards and electronic games. The campus box office, book store, post office and parking services are located there, as well as the offices of the Student Government Association, the student newspaper Towerlight, and the yearbook Tower Echoes. Conferences, as well as dinners, dances, and other social events are also held in the building. Conferences, as well as dinners, dances, and other social events are also held in the building.

**ADMINISTRATION BUILDING** - Completed in 1972, it houses the executive and administrative offices of the university in a three-story modern building.

**DOWELL HALL** - This building completed in 1962 houses Medical Treatment facilities on the lower floor consisting of treatment rooms, a 4-

bed infirmary, and a whirlpool bath. The second floor is occupied by the Center for Orientation and Academic Advising.

**THE BURKSHIRE AT TOWSON UNIVERSITY** - The newest addition adjacent to campus is a 17-story apartment building intended for faculty, staff and qualifying students. Other facilities in The Burkshire make it suitable for professional meetings, conferences, luncheons and dinners, as well as social gatherings. An elevated footbridge crosses Burke Avenue to connect the main campus with The Burkshire property.

**GLEN ESK** - Formerly the home of the president, it is now occupied by the Counseling Cen-

ter, which provides counseling and psychological services.

**GENERAL SERVICES BUILDING** - These facilities open in 1969 to consolidate the physical plant and other service operations. The building houses maintenance trade shops, the motor pool, headquarters for the police department, and central stores and receiving.

**MINNEGAN STADIUM** - Completed in time for the fall, 1979 football season, the stadium is the home of Towson's NCAA Division IAA Tigers. There is an outdoor track. Seating for 5,000 fans can be expanded to double that number.

## Appendix B

### THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

The Family Educational Rights and Privacy Act of 1974 is a Federal Law which provides that the institution must maintain the confidentiality of student education records. This law states (a) that a written institutional policy must be established and (b) that a statement of adopted procedures covering the privacy rights of students be made available. The University has taken the appropriate steps to comply with this law.

Towson University accords all the right under the law to students who have reached the age of majority. Information may be released to parents who have established the students' dependency as defined by the Internal Revenue Code of 1954, Section 152. The Judicial Affairs office will review the parent's claim of dependency and notify the student of the claim prior to release of any academic information. Except as permitted under the act, no one outside the institution shall have access to any information from the students' education records without the written consent of students. Those people permitted access under the Act include personnel within the institution, officials of other institutions in which students seek to enroll,

persons or organizations providing financial aid, accrediting agencies, persons in compliance with a judicial order and persons in an emergency acting in order to protect the health or safety of others.

Within the Towson University community, only those individuals acting in the students' educational interest are allowed access to student education records. This includes personnel in the offices of the Registrar, Comptroller. Financial Aid, and other academic personnel within the limitations of their need to know. The Registrar may grant access to educational records for other legitimate reasons permitted under the Act.

The University may provide Directory Information in accordance with the provisions of the Act without the written consent of the student. Directory information includes: student name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and awards received, the most recent previous educational institution attended by the student, participation in officially recognized activities and sports, and the weight and height of members of athletic teams. The Registrar's

Office will release Directory Information at its discretion and may release Directory Information over the telephone or in writing. Students may withhold Directory Information by notifying the registrar in writing within two weeks after the first day of class.

A request for non-disclosure will be honored for only one academic year; therefore, authorization to withhold Directory Information must be filed annually with the Registrar.

The law provides students with the right to inspect and review information contained in their education records. The Registrar at Towson University has been designated to coordinate the inspection and review of student education records. These records include admissions, personal, academic and financial files. Students wishing to review their education records must make written requests to the Registrar. Records covered by the Act will be made available within thirty day of the request. Students may have copies made of their records with certain exceptions (e.g., a copy of the original or source document which exists elsewhere) or when the student has an outstanding financial obligation to the University. These copies would be made at the students' expense. Education records do not necessarily include records of instructional, administrative, and educational personnel which are the sole possession of the maker. Health records will not be released to the students, but may be reviewed by physicians of the students' choosing.

As stated in the Act, students may not inspect and review the following: financial information submitted by their parents, confidential letters and recommendations associated with admissions, employment or job placement or honors to which they have waived their rights of inspection and review. Educational records containing information about more than one student are restricted and the institution will permit access only to that part of the record which pertains to the student. The institution will not permit students to inspect and review confidential letters and recommendations placed in their files prior to January 1, 1975.

The University has established an appeal mechanism in accordance with the Act. Students who believe that their education records

contain information that is inaccurate or misleading, or unlawful may discuss their problems informally with the Registrar. The Registrar may agree to the request and the appropriate records will be amended. If not, the students will be notified that the records will not be amended; and they will be informed by the registrar of their right to a formal hearing. Requests for formal hearings must be made in writing to the Vice President for Academic Affairs. The Vice President will inform students of the date, place, and time of the hearing. Students may present evidence and may be assisted or represented at the hearings by counsel. The hearing panels which will adjudicate such challenges will be comprised of the Vice President for Academic Affairs, the Vice President for Student Affairs, the Graduate Dean, and the Academic Dean of the student's college. Decisions of the hearing panels will be final. The finding will be based solely on the evidence presented at the hearing, and will consist of written statements summarizing the evidence and stating the reasons for the decisions, and will be delivered to all parties concerned. The education records will be corrected or amended in accordance with the decisions of the hearing panels. Students dissatisfied with the outcome of their hearing may prepare a written statement which will be placed in the education records and maintained as part of the students' records.

Those students who believe that the adjudications of the challenges were unfair, or not in keeping with the provisions of the act may request that the hearing be reviewed by the President of the University. In addition, students who believe that their rights have been abridged, may file complaints, with The Family Educational Rights and Privacy Act Office (FERPA), Department of Health, Education and Welfare, Washington, D.C. 20201, concerning the alleged failures of Towson University to comply with the Act. Revisions and clarifications will be published as experience with the law and institution's policy warrants.

## Appendix C

### I. RESIDENCY

It is the policy of the Board of Regents of the University System of Maryland to recognize the categories of in-state and out-of-state students for purposes of admission, tuition, and charge differentials at those institutions where such differentiation has been established. The student is responsible for providing the information necessary to establish eligibility for in-state status.

A. Students who are financially independent or financially dependent, as hereinafter defined, shall have their residency classification determined on the basis of permanent residency. For purposes of this policy, a permanent residence is a person's permanent place of abode as determined by the following criteria. Such students will be assigned in-state status for admission, tuition, and charge differential purposes only if the student (if financially independent) or the student's parent, guardian, or spouse (in the case of a financially dependent student):

1. Owns or rents and occupies living quarters in Maryland. There must exist a genuine deed or lease in the individual's name reflecting payments/rents and terms typical of those in the community at the time executed. Persons not having such a lease may submit an affidavit reflecting payments/rents and terms as well as the name and address of the person to whom payments are made which may be considered as meeting this condition. As an alternative to ownership or rental of living quarters in Maryland, a student may share living quarters in Maryland which are owned or rented and occupied by a parent, legal guardian, or spouse;
2. Maintains within Maryland substantially all personal property;
3. Pays Maryland income tax on all earned taxable income including all taxable income earned outside of the State;
4. Registers all owned motor vehicles in Maryland in accordance with Maryland law;

5. Possesses a valid Maryland driver's license, if licensed, in accordance with Maryland law;
  6. Is registered in Maryland, if registered to vote;
  7. Receives no public assistance from a state other than the State of Maryland or from a city, county, or municipal agency other than one in Maryland, and;
  8. Has a legal ability under federal and Maryland law to reside permanently without interruption in Maryland.
- B. In addition to meeting all of the criteria set forth in the preceding section, to qualify for in-state status on the basis of permanent residence, a student or, if the student is financially dependent, the parent, legal guardian, or spouse, must have resided in Maryland for at least twelve (12) consecutive months immediately prior to and including the last date available for late registration for the forthcoming semester or session and must have continuously resided in Maryland during that period.
- C. If a student is financially dependent as hereinafter defined, the permanent residence of the parent, guardian, or spouse on whom he/she is dependent shall determine in-state status. If a student is financially independent, the permanent residence of the student shall determine in-state status.
- D. In-state status based on permanent residence is lost at any time a financially independent student establishes a permanent residence outside the State of Maryland. If the parent, guardian, or spouse through whom a financially dependent student has attained in-state status establishes permanent residence outside the State of Maryland, the in-state status is lost, in each instance, the student will then be assessed out-of-state tuition and charge beginning the next semester or session.
- E. In addition, the following categories of students shall have in-state status:
1. A full-time or part-time (at least 50 percent time) permanent employee of the University System of Maryland;

2. The spouse or dependent child of a full-time or part-time (at least 50 percent time) permanent employee of the University System of Maryland;
  3. A full-time active member of the Armed Forces of the United States whose home of residency is Maryland or one who resides or is stationed in Maryland, or the spouse of a financially dependent child of such a person; and
  4. A graduate assistant.
- F. Students not entitled to in-state status under the preceding paragraphs shall be assigned out-of-state status for admission, tuition, and charge-differential purposes.

## II. PROCEDURES

- A. The date on which conditions for in-state classification must be met is the last published date to register for the forthcoming semester or session. In those instances where an entering class size is established and where an application deadline is stated, institutions may require that conditions for in-state classification must be satisfied as the announced closing application date.
- B. A change in status must be requested in writing by a student prior to the last published date of registration in order to be effective for that semester or session. A student applying for a change to in-state status must furnish appropriate documentation as required by the institution.
- C. The student shall notify the institution in writing within fifteen (15) days of any change of circumstances which may alter in-state status.
- D. In the event incomplete, false, or misleading information is presented, the institution may, at its discretion, revoke an assignment of in-state status in addition to other disciplinary actions provided for by the institution's policy.
- E. Each institution of the University System of Maryland shall develop and publish additional procedures to implement this policy. Procedures shall provide that on request the President or designee has the authority to waive any residency requirement as set forth in 1A and 1B, if it is determined that the

student is indeed a permanent resident and application of the criteria creates an unjust result. Such procedures must provide for appeal to the President or designee of any residency determination using a system wide petition form. These procedures shall be filed with the office of the Chancellor.

## III. DEFINITIONS

- A. Financially Dependent: For purposes of this policy, a financially dependent student is one who is claimed as a dependent for tax purposes, or who receives more than one-half of his or her support from a parent, legal guardian, or spouse during the twelve (12) month period immediately prior to the last published date for registration for the semester or session. If a student receives more than one-half of his or her support in the aggregate from a parent and/or legal guardian and/or spouse, the student shall be considered financially dependent on the person providing the greater amount of support.
- B. Financially Independent: A financially independent student is one who (1) declares himself or herself to be financially independent as defined herein; (2) does not appear as a dependent on the Federal or State income tax return of any other person; (3) receives less than one-half of his or her support from any other person or persons; and (4) demonstrates that he or she provides through self-support one-half or more of his or her total expenses.
- C. Parent: A parent may be a natural parent, or, if established by a court order recognized under the law of the State of Maryland, and adoptive parent.
- D. Guardian: A guardian is a person so appointed by a court order recognized under the law of the State of Maryland.
- E. Spouse: a spouse is a partner in a legally contracted marriage.
- F. Support: (1) Except as set forth in (2) below, support shall mean financial or material support, including gifts, services, and trusts, including income or benefits derived from one's family. (3) Support shall not include grants, stipends, awards, and benefits (including Federal and State student aid, grants, and loans) received for the purpose of education or by virtue of an

individual's status or prospective status as a student. Such resource shall not be considered in

calculating a student's financial dependence or independence.

## Appendix D

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### **The Mission of Graduate Programs for Teachers and Education Specialists at Towson University Approved 10/90**

#### *"The University that Prepares Teachers as Facilitators of Active Learning"*

Graduate programs in the field of Education at Towson University provide advanced study for teachers and education specialists. Study includes emphasis on understanding knowledge, skill development, and attitudes essential to experienced professionals in education settings.

The University's graduate programs for teachers and education specialists emphasize methods of instruction and scholarship which promote active student learning. To this end, the faculty are committed to the following goals:

**SCHOLARLY GROWTH:** Demonstrate a commitment to scholarly growth in teaching, research and service.

**ADVANCED STUDY:** Provide instruction which emphasizes advanced study of knowledge and skills in their specialization.

**INTERPERSONAL RELATIONS:** Promote good interpersonal relationships among persons in the teacher education community.

**PROFESSIONALISM:** Promote positive attitudes and professional commitment.

**ACTIVE PARTICIPATION:** Promote active involvement of persons in campus, community, and professional affiliations.

**RESEARCH:** Develop in students the ability to conduct, interpret, evaluate and communicate research in their specialty.

**PROFESSIONAL SKILLS:** Develop in students successful methods used by practicing professionals in their specialty.

**INSTRUCTIONAL TECHNOLOGY:** De-

velop in students the values and skills that insure utilization of current and emerging technologies.

**MULTICULTURALISM:** Develop understandings in students which enable them to work with students and other professionals of diverse ethnic and cultural backgrounds.

**HUMAN DEVELOPMENT:** Promote an understanding of human development that permits interpretation of learning behavior from childhood through adulthood.

**INTEGRATING THEORY AND PRACTICE:** Provide internships (in certification programs) that provide opportunities to integrate theory and practice.

**MERIT SYSTEM:** Maintain an evaluation and reward system that encourages superior performance by faculty and students.

**INDIVIDUAL DIFFERENCES:** Provide equal opportunity for students to pursue their interests and talents without regard for race, cultural background, sex, or handicaps.

**UNIVERSITY/SCHOOL RELATIONS:** Work cooperatively with school systems and other agencies to develop advanced programs that meet current educational needs.

**MINORITY PARTICIPATION:** Actively recruit members of under-represented minority groups for careers in education.

### **Statement of Professional Conduct**

The faculty recognizes a special responsibility and authority to ensure that students in graduate degree programs in Education demonstrate attitudes and behaviors consistent with standards of the program and the profession. Therefore, the faculty reserves the authority to exclude a student whose academic standing or general conduct is considered unsatisfactory. The student has the right to due process.

## Appendix E

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### TOWSON UNIVERSITY SUBSTANCE ABUSE POLICY FOR FACULTY STAFF AND STUDENTS

#### University System of Maryland Policy

The University System of Maryland, as an employer, strives to maintain a workplace free from the illegal use, possession, or distribution of controlled substances (as defined pursuant to Controlled Substance Act, 21 U.S.C. Sections 801, et. Seq.) Unlawful manufacture, distribution, dispensations, possession or use of controlled substances by University employees in the workplace is prohibited under University policy.

In addition to any legal penalties under federal and state law, employees found to be in violation of this policy or the Maryland Governor's Executive Order on Substance Abuse, 01.01.1991.16, may be subject to corrective action under applicable University personnel policies.

The University supports programs aimed at the prevention of substance abuse by University employees. Employees are encouraged to seek assistance for substance-dependency problems. Employee-assistance counseling and leaves of absence to attend rehabilitation programs are appropriate means for dealing with these problems.

#### Towson University Policy<sup>1</sup>

The use of controlled substances and the abuse of alcohol presents a serious threat to individual health and everyone's safety. Moreover the use of illegal drugs and the abuse of alcohol can result in less than complete reliability, stability, and good judgment which is inconsistent with the standards set for the faculty, staff, and students of this University.

Towson University, as an employer, strives to maintain a workplace free from the illegal use, distribution, or possession of controlled substance. Any person found to be participating in such activity will be subject to administrative disciplinary action, mandatory counseling and treatment and/or criminal proceedings.

The use, possession, and/or sale of illegal drugs, are considered violations of Towson University's Student Code of Conduct, the faculty contract, and the terms of employment of administrative, classified, and contractual staff. Faculty, students, and employees who use, possess, or sell illegal drugs shall be subject to discipline, including mandatory counseling, suspension, or dismissal from the University. The University will take disciplinary action based on reasonable available information; such action will be independent of any civil or criminal processes precipitated by the same incident and will follow the policies and procedures of the University and the University System of Maryland Board of Regents.

In the workplace, use, possession, and/or sale of illegal drugs and controlled substances are also violations of state and federal laws for which individuals are subject to University disciplinary processes and/or arrest and criminal prosecution.

These serious workplace situations must be handled in ways which ensure the protection of the civil rights and handicapped rights of the accused, the treatment and rehabilitation of employees, and the notification of the necessary administrative and legal authorities.

Specific procedures for reporting drug use, penalties and appeals are part of a student handbook. Employee disciplinary measures and appeals for violations of this policy as well as other policies of the University are part of the Faculty Handbook, the Part-Time Faculty Handbook, and the Personnel Manual.

In addition to the University policy on substance abuse, all employees of the University including student employees are subject to the Maryland Governor's Executive Order 01.01.1991.16 on the Drug- and Alcohol-Free Workplace.

In accordance with federal legislation, Towson University's substance abuse policy will be distributed annually to all students<sup>2</sup> and employees through campus or U.S. Mail.

Furthermore, the student-athlete is additionally subject to the Towson University Department of Athletics Substance Abuse Policy. A

copy of this policy can be obtained from the Athletics Department office.

## **HEALTH RISKS OF SUBSTANCE ABUSE**

Substance abuse is now recognized as the number one public health problem in the United States. Approximately 30% of all admissions to general hospitals and 50% to psychiatric hospitals have detectable substance abuse. Substance abuse accounts for approximately 150,000 deaths annually. This includes deaths from stroke, diseases of the heart and liver, and all alcohol and drug related suicides, homicides and accidents. Early detection can minimize or prevent the devastating consequences of substance abuse.

## **PENALTIES FOR SUSPECTED DRUG USE, POSSESSION OR SALE ON THE TOWSON UNIVERSITY CAMPUS**

- A. The use, possession or sale of illegal drugs are violations of state and federal laws for which offenders are subject to arrest and criminal prosecution as well as University administrative processes. These serious offenses must be handled in ways to ensure the guarding of any evidence, the protection of the civil rights of the accused, and the notification of the proper authorities. To this end, specific procedures are outlined to be followed in any campus situation where substances are suspected to be illegal drugs.
- B. Any individual directly associated with the University System of Maryland who uses or becomes involved with illegal drugs without proper medical supervision shall be subject to such discipline, including suspension or dismissal from the state university and college system, as may be appropriate.
- C. Students, faculty and staff, in their routine activities, may observe suspected drug activities. As a result, some staff members become involved in the determination of any disciplinary action that follows suspected use, possession or distribution of an illegal substance. Specific actions or responsibilities in regard to the suspicion of illegal substances are listed in the following passage.

- D. The University reserves the right to conduct drug testing consistent with applicable federal and state laws.

## **LOCAL, STATE, AND FEDERAL LAW DESCRIPTIONS RELATING TO POSSESSION AND DISTRIBUTION**

Students and employees at Towson are subject to federal, state, and local laws for the possession and distribution, of illegal drugs.

Federal law<sup>3</sup> states that it is unlawful to possess any controlled substance, including marijuana, cocaine, and heroin, for any illegal purpose. If the substance is cocaine, or contains a cocaine base, the penalty for simple possession is a fine and/or imprisonment from 5 to 20 years. For other illegal drugs, the penalty for simple possession is a fine of at least \$1000 and/or imprisonment for up to 3 years. The penalties increase if the possession includes intent to manufacture, distribute, or dispense a controlled substance, especially if done so near a public or private elementary, vocational, or secondary school, or a public or private college or university. Additionally, any person who violates this law shall also be liable to the U.S. for an amount up to \$10,000 in civil penalties.

In addition to the federal laws, the State of Maryland has its own laws dealing with distribution, manufacturing, and possession of controlled substance. For instance, any person who unlawfully manufactures or distributes any controlled dangerous substances may be fined up to \$25,000 and may be imprisoned for up to 20 years for a first offense.<sup>4</sup>

Students and employees at Towson are subject to state and local laws for drinking and obtaining alcohol.

It is illegal in the State of Maryland for any person under 21 to drink alcohol.<sup>5</sup> It is also illegal for a person under 21 to falsify or misrepresent his or her age to obtain alcohol, or to possess alcoholic beverages with the intent to consume them.<sup>6</sup> It is also illegal in most situations to furnish alcohol to a person under 21, or to obtain alcohol on behalf of a person under 21. The penalty is a fine up to \$500 for a first offense, and up to \$1000 for repeat offenses.

In addition, state law<sup>7</sup> dictates that it is illegal in Baltimore County to possess alcohol in an

open container in any parking lot of any shopping center or retail store, unless given permission by the owner. The penalty is a fine up to \$100.

It is also illegal in Baltimore County to consume alcohol on any public property or highway, with penalties including a fine of up to \$100 and/or imprisonment of up to 30 days.

Students and employees of Towson University are also subject to state and local laws governing drinking and driving.<sup>8</sup> It is unlawful to drink and then drive.<sup>9</sup> A Blood Alcohol Level of .07 or 1.0 will result in fines, imprisonment or both. Individuals under 21 with a B.A.L. of only .02 (approximately 1 drink) will be charged with a violation of restricted license which will result in a suspended license until the age of 21.<sup>10</sup>

Any individual with a B.A.L. of .07 or more will be charged with a violation of Driving While Under the Influence.<sup>11</sup> A B.A.L. of .10 or more will result in a violation of Driving While Intoxicated.<sup>12</sup>

It is also unlawful to drive while under the influence of any Controlled Dangerous substances whether or not they are licit or illicit (prescribed or unlawfully obtained).<sup>13</sup> Persons can still be charged with these violation even though they possess a driver's license from another state.<sup>14</sup>

1 Towson University policy on substance abuse includes provisions for the Maryland Governor's Executive Order 01.01.1991.16 on the Drug- and Alcohol-Free Workplace, the policies of the University of Maryland

Board of Regents, The Maryland Commission on Higher Education, the Code of Maryland Annotated Regulations, the Federal Drug-Free Workplace (34 CFR Part 85) and the Federal Drug-Free Schools and Campuses (34 CFR Part 86).  
2 The definition of a student is one who is taking one or more classes for any type of academic credit except for continuing education units, regardless of the length of the student's program of study.  
3 Federal Law 21 USCA, section 841 and 844 to 845a (1990).  
4 MD Ann. Code Art 27, section 286 (1989).  
5 MD Code Art 27, section 400A.  
6 MD Ann. Code Art. 27, sections 400 to 403B.  
7 MD Ann. Code Art. 2B, section 214.  
8 MD Ann. Code Art. 16, section 113.  
9 MD Code Transportation Art, section 21-902.  
10 MD Code Transportation Art, section 16-113 (b).  
11 MD Code Courts and Judicial Proceedings Art, section 10-307 (d).  
12 MD Code Courts and Judicial Proceedings Art, section 10-307 (e).  
13 MD Code Transportation Art, section 21-902 (c)(z).  
14 MD Code Transportation Art, section 21-902.

# Appendix F

## GRADUATE STUDENT PROCEDURES FOR APPEALS, HEARINGS, AND GRIEVANCES

### STUDENTS RIGHTS AND RESPONSIBILITIES

**Rights:** The student is entitled to privacy, expression, non-discrimination, non-harassment, and appeal.

**Responsibilities:** The student is responsible

for: (1) being knowledgeable of, and observing, all University and Graduate School policies, regulations, procedures, and academic requirements, including specific requirements of the program; and (2) participating in the maintenance of a high standard of academic integrity.

Appeals and grievances are initiated by the student. Hearings are initiated by the University.

## APPEALS

**Exceptions to Policies:** A student may petition for an exception to academic and admissions policies and procedures on either procedural or substantive grounds. The petition must be made to the Dean of the Graduate School. If not satisfied with the Dean's decision, the student may submit a written appeal to the Graduate Studies Committee, c/o the Graduate school. Appeal of a Graduate Studies Committee decision is made in writing to the Provost of the University.

Appeals of academic and admissions policies other than those that follow must adhere to the appeals procedure stated above.

**Dismissal From Programs:** The Dean of the Graduate School may dismiss a student for cause from a program based on academic or other Graduate School policies or on the recommendation of a department. A student who is dismissed will be notified in writing of the dismissal. The student's written appeal must be received in the Graduate School within 15 working days of the date of the notification of dismissal.

**Grades:** A student appealing a course grade must make all reasonable effort to resolve the matter informally in the following sequence: (1) he or she must meet with the instructor; (2) if not satisfied, the student meets with the department chairperson; (3) if still not satisfied, the student meets with the Dean of the college or school. If the problem is not resolved to the student's satisfaction, he or she may appeal in writing to the Graduate Studies Committee. The appeal will be received only after the above steps have been taken, and must be received by the Graduate Studies Committee no later than the end of the semester following the one in which the grade was received.

The Graduate Studies Committee reviews the appeal, and will send it to the Adjudication Committee only if there is sufficient evidence that a grade has not been determined in accordance with the terms set forth by the instructor.

**Academic Integrity:** Instructors are responsible for maintaining the academic integrity of courses and will initially handle problems of classroom conduct, including but not limited to cheating and plagiarism. The instructor

may lower the student's grade or give a failing grade for the course. A student appealing an instructor's decision must make all reasonable effort to resolve the matter informally in the following sequence: (1) he or she must meet with the instructor; (2) if not satisfied, the student meets with the department chairperson; (3) if the problem is not resolved to the student's satisfaction, he or she may appeal in writing to the Graduate Studies Committee. The appeal will be received only after the above steps have been taken, and must be received by the Graduate Studies Committee no later than the end of the semester following the one in which the grade was received.

## HEARINGS

Students are expected to maintain a high standard of academic integrity. If a violation of academic integrity occurs in a classroom and if the instructor decides that further action beyond that taken within the course is warranted, he or she will notify the student that a formal charge will be made to the Graduate School Committee. A written report of the incident will be filed with the committee.

In cases of violation of Graduate School policies, efforts will be made by the Graduate School administration to clarify and to allow the student the opportunity to address and resolve the issue before any charges are made in writing to the Graduate Studies Committee.

A hearing before the Graduate Studies Committee is held whenever charges are made against a student by the Graduate School for infraction of Graduate School Policy which includes, but is not limited to, academic integrity, falsification of documents, or other acts of misrepresentation. Disciplinary action by the committee may include dismissal from the Graduate School.

### Hearing Procedures:

1. The proceedings are recorded.
2. The Chair of the Graduate Studies Committee explains the purpose of the hearing.
3. The Chair reads the charges. The student is present for the hearing. If the student does not appear, this will be stated for the record and construed as a plea of guilty.

4. The student may be accompanied by a friendly observer. This party may not be or act as legal counsel, except when concurrent criminal charges have been filed. Then counsel may advise the accused party but may not otherwise participate in the hearing.
5. Evidence, either in writing or by testimony of witness, is presented. Witnesses may be questioned by the committee and the student.
6. The student is afforded an opportunity to present his or her side of the story and to call witnesses. Character witnesses will not be heard. Witnesses for the student may be questioned by the committee and then be excused.
7. The committee members may ask questions of the student, the instructor, and the Graduate Coordinator.
8. The student may ask questions and make a closing statement.
9. The student and other non-committee members are excused.
10. The committee deliberates in executive session and renders a decision. These deliberations are not recorded.
11. The student is notified of the decision by letter within 15 days of the hearing. When appropriate, the notification includes instructions on further appeals.
12. The recording will be kept on file in the Graduate School for one year.

## GRIEVANCES

**Redress of Grievance:** Grievances based on the following grounds are made to the Judicial Affairs Officer, who will instruct the student on submitting a written grievance:

1. A flaw in the student's right of due process
2. Evident bias in the decision of the hearing body
3. Inconsistent or overly severe sanction imposed
4. New evidence of insufficient consideration of all aspects of the situation.

**Discrimination and Harassment:** The University complies with all state and federal civil rights legislation. The University's policy is to prohibit discrimination against any individual for reason of race, color, religion, national origin, political affiliation, marital status, sexual orientation, disability, veteran status, or other non-merit factor.

If a student alleges discrimination and/or harassment, he or she shall make all reasonable effort to resolve the issue(s) with and in the following order: (1) the instructor, (2) the department chair, and (3) the Dean of the college or school within 30 days of the alleged incident. The student should confer with the Fair Practices Officer if issues are not satisfactorily resolved. A student making a formal complaint of discrimination and/or harassment must submit a written statement to the Office of Fair Practices within 180 days of the date of the alleged incident.

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# TOWSON

## UNIVERSITY

### Campus Map

#### Academic and Administrative Buildings

- AD Administration Building - A4
- AH Auburn House - E2
- BU Burdick Hall - B5
- CK Cook Library - D7
- DH Dowell Hall - C7
- FA Fine Arts Center - C4
- GS General Services - A5
- GE Gen Esq - C7
- HH Hawkins Hall - C6
- LH Lecture Hall - C5
- LT Lida Lee Tall - C6

#### Residence Buildings

- BK Burkshire Apartments - C8
- A Glen Complex (A Building) - C5
- B Glen Complex (B Building) - C5
- C Glen Complex (C Building) - D5
- D Glen Complex (D Building) - D5
- GD Glen Dining Hall - C5
- NE Nevell Hall - D7
- ND Nevell Dining Hall - D7
- PR Prettyman Hall - D8
- RT Residence Tower - C7
- RI Richmond Hall - D7
- SC Scarborough Hall - D8
- TR Towson Run Apartments - A3
- WA Ward Hall - C8
- WE West Hall - C7

#### Visitor Parking

- SP Student Parking
- FP Faculty/Staff Parking



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